5th Edition Autumn 2021

CAF-02

INTRODUCTION TO ECONOMICS AND FINANCE

Study Notes, MCQs, Revision Set

Salient Features:

- Full Coverage of ICAP's Latest Syllabus of CAF-02.
- Substantial Coverage of Latest Syllabus of ICMAP & PIPFA.
- Unique "Exam Focused Concept-Based Approach" of Author.
- Every Concept Supplemented by Past Exam Questions(s) for Immediate Evaluation.

Author: Muhammad Asif, FCA

RISE PREMIER
PUBLICATIONS

www.riseschool.edu.pk

TABLE OF CONTENTS

* Part of this chapter (relating to "Inflation" and "Unemployment") is included in Grid C; and all other topics are included in Grid D.

Unimportant Paragraphs and Questions in ICAP's Book

Unimportant Paragraphs:
Following paragraphs in ICAP's Official Study Text are not specifically discussed as separate LOs in this book because they are either not important from exam point of view, or have been indirectly covered with other LOs. However, if you have covered all other topics in the book and still have plenty of time, you can also read them from ICAP's book.

Chapter #	Paragraph*
Chapter 1	▪ Importance of Economics (1.2.4) ▪ Definition of Rational Behavior (1.3.7) ▪ Introduction (1.5.1) ▪ Happiness vs. money, Cycles and depression (1.5.3)
Chapter 3	▪ Diagrams of Milk market, Corn Market and Buffer Stock Scheme (3.3.2)
Chapter 13	▪ How a bank makes money (13.1.4)

**First digit of the reference indicates Chapter # in ICAP's Study Text, second and third digits show section and sub-section in that chapter.*

Unimportant Questions:
Following is a list of questions included in ICAP's Official Question Bank which are not in style or pattern of ICAP's examination questions, or are out of syllabus and, therefore, may be skipped. However, you can read these questions if you have practiced other questions and have enough time.

- 1.3 Economic Growth
- 2.4 A Market Economy, Part b
- 3.6 Coffee Market
- 5.4 Large Firms
- 5.5 The Scale Of Production
- 5.6 Monopoly And Competition
- 9.4 Trade Cycle
- 11.2 Money Supply And Quantity Theory

CHAPTER ONE
FUNDAMENTALS OF ECONOMICS

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A– INTRODUCTION TO ECONOMICS			
LO 1	DEFINITION OF ECONOMICS	1.1.2, 1.1.2, 1.1.3	N/A
LO 2	NATURE OF ECNOMICS	1.2.2, 1.2.3	N/A
LO 3	BRANCHES OF ECONOMICS	1.3.3, 1.2.4	N/A
PART B – BASIC CONCEPTS OF ECONOMICS			
LO 4	PARTICIPANTS/AGENTS OF ECONOMY	1.3.4	N/A
LO 5	BASIC ECONOMIC PROBLEM (OR BASIC ECONOMIC QUESTIONS)	1.2.1, 1.3.1, 1.3.7, 1.4.1	N/A
LO 6	OPPORTUNITY COST	1.3.9	N/A
PART C – PRODUCTION OF AN ECONOMY			
LO 7	PRODUCTION AND FACTORS OF PRODUCTION	1.3.5, 1.3.8	N/A
LO 8	PRODUCTION POSSIBILITY FROENTIER/CURVE	1.4.2	1.2, 1.3
PART D – ECONOMIC SYSTEMS			
LO 9	THREE TYPES OF ECONOMIC SYSTEMS	1.4.3, 1.4.4, 1.4.5, 1.4.6	1.1b, 2.4a
LO 10	ISLAMIC ECONOMIC SYSTEM	1.5.1, 1.5.2, 1.5.3, 1.5.4	1.4

*** October 2016 Edition*

PART A – INTRODUCTION TO ECONOMICS

LO 1: DEFINITION OF ECONOMICS:

By Adam Smith: *(Classical Economist)*

Definition:

"Economics is the science which studies the production, distribution, consumption and exchange of wealth".

Critical Analysis:

Economics revolves around 'wealth' only and teaches selfishness. Its scope is narrow and ignores the most important concepts of economics i.e. scarcity and choice.

By Alfred Marshal: *(Neo-Classical Economist)*

Definition:

"Economics is a study of mankind in the ordinary business of life. It examines that part of individual and social action which is closely connected with the attainment and use of material requisites of well-being".

Critical Analysis:

Although this definition shifted focus of economics from "wealth" to "well-being", however, it narrows scope of economics by classifying only material goods in economics. Non-material goods should also be studied in economics, provided they have values.

Further, this definition was considered vague, impracticable and judgmental.

By Robbins: *(Modern Economist)*

Definition:

"Economics is the science, which studies human behavior as a relationship between ends and scarce means, which have alternative uses".

Critical Analysis:

- Human wants are unlimited.
- Resources are Scarce. *(Scarcity means resources available to humanity are insufficient to satisfy all of man's wants).*
- Therefore society has to make choice. (Choice means deciding to how to allocate limited resources between alternative wants).

LO 2: NATURE OF ECNOMICS:

Is Economics a Science or Arts?

Economics behave as a science in its methodology, and as arts in its application.

Economics is a science, because an economist collects facts, analyzes them, classifies them and then discovers general principles governing facts.

Economics is an art because it cannot predict future events like other science subjects. Its application depends on human behavior which has freedom of will.

Is Economics a Positive science or Normative science?

Economics is both a positive science and normative science.

Positive science discusses 'what is' i.e. it 'describes'. For example, if we say that an entrepreneur makes decisions on the basis of profit, it is positive science.

Normative science discusses 'what should be' i.e. it 'evaluates'. For example, if we consider whether entrepreneur should make decisions on the basis of profit, it is normative science.

CONCEPT REVIEW QUESTION

Q. 1

"Economics is a positive science, and a normative science." Explain the nature of Economics with reference to the above statement. **(02)**

(ICMA Pakistan – Summer 2008)

LO 3: BRANCHES OF ECONOMICS:

There are two branches of economics i.e. Microeconomics and Macroeconomics.

	Microeconomics	**Macroeconomics**
Definition	Micro means small. Microeconomics is the branch of economics concerned with the behavior households, firms, and markets.	Macro means large. Macroeconomics is the branch of economics concerned with the overall performance of the economy.
Scope/Focus/Importance	It helps in determining market equilibrium (i.e. determining price, output and effect of market conditions on equilibrium). It is also concerned with Consumer Equilibrium, Firm Equilibrium.	It helps to solve problems of inflation, unemployment, economic growth and balance of payment.
Limitations	Microeconomics ignores the implications on whole economy. A decision may be useful for single unit not may not be useful for whole economy (e.g. saving decision).	Macroeconomics ignores implications on individuals. What is good for overall economy, may not be good for individuals (e.g. a surplus fiscal budget).
Interdependence between micro and macro economics	Mircoeconomics deals with individual players.	Macrcoeconomics focuses on system as a whole.

CONCEPT REVIEW QUESTION

Q. 2

Highlight the main differences between microeconomics and macroeconomics. **(06)**

(ICAP, CAF 02 Level – Autumn 2008)

PART B – BASIC CONCEPTS OF ECONOMICS

LO 4: PARTICIPANTS/AGENTS OF ECONOMY:

Definition of Agent:

Agent is a decision maker in an economic model.

Types of Agents:

There are four types of agents:

1. **Households: (also called buyer, consumer, individual):**
   The collective group of individuals who consume goods and services in an economy, and provide labor for firms.

2. **Firm: (also called seller, producer, business):**
   The collective group of organizations who produce goods and services in an economy.

3. **Government: (also called State):**
   Organisation that governs society through a combination of laws and customs.

4. **Foreign Traders: (also called importers and exporters):**
   The collective group who exchange goods and services between different economies. These include importers (who purchase from other countries), and exporters (who sell to other countries).

Study Tip: Production and Consumption

Terms Consuming or Purchasing or Spending or Expending have same meanings.

CONCEPT REVIEW QUESTION

Q. 3
Economic problems affect different agents within an economy in different ways. Define three main types of such agents in an open economy. **(03)**

(ICAP, CAF 02 Level – Autumn 2017)

LO 5: BASIC ECONOMIC PROBLEM (OR BASIC ECONOMIC QUESTIONS):

Our resources are scarce, but our needs are unlimited. Basic economic problems means choosing how to allocate these scarce resources to satisfy our unlimited wants i.e.

1. What to produce? (e.g. whether capital goods or consumer goods)
2. How to produce? (i.e. with what resources, and what production techniques to use), and
3. For whom to produce? (i.e. whom to distribute goods and how much)

Study Tip: Scarcity and Choice

- **Scarcity:** Where resources are insufficient to satisfy all of wants.
- **Choice:** Process of allocating resources between wants.

CONCEPT REVIEW QUESTION

Q. 4
What are the fundamental problems of an economy?

(PIPFA – Summer 2017)

LO 6: OPPORTUNITY COST:

Definition:

The opportunity cost is the value of the most valuable alternative (good or service) foregone.

Examples:

- If government constructs a road, its opportunity cost might be a school that could have been built.
- If a student decides to attend college, its opportunity cost will be wages not earned by him.

Study Tip: Calculation of Opportunity Cost

In economics, we calculate opportunity cost in terms of another good or service sacrificed. However, it may also be calculated in terms of money.

Application of concept of Opportunity Cost:

Due to scarcity of resources, every agent of economy considers opportunity cost in making decision.

- **Households:**
  Household has to make decision which goods and services to consume. If an individual consumes Good A, then satisfaction foregone of Good B will be opportunity cost.

- **Firms:**
  Firm has to make decision which goods to produce. If a firm produces Good A, then revenue foregone of Good B will be opportunity cost.

- **Government:**
  Government has to decide which social services to provide to its citizens. If a government decides to provide citizens Service A (e.g. Health), then Service foregone of B (e.g. Education) will be opportunity cost.

- **International:**
  Nation has to decide which good to import, and which to export. If a nation decides to export a Good, then revenue lost from local market will be opportunity cost.

CONCEPT REVIEW QUESTION

Q. 5

(a) What is Opportunity Cost? Give two examples. **(03)**

(b) How does the concept of Opportunity Cost apply to households, firms and the Government? **(07)**

(PIPFA – Summer 2016)

Q. 6

The basic economic problem is the scarcity of resources and the multiplicity of ends. Discuss how following participants in an economy make decisions to deal with that problem:

(i) households

(ii) firms

(iii) government

(ICAP, CAF 02 Level-Autumn 2018)

PART C – PRODUCTION OF AN ECONOMY

LO 7: PRODUCTION AND FACTORS OF PRODUCTION:

Meaning of Production:

Production is a process that adds value. It combines inputs (or factors of production or resources) and converts them into outputs (goods and services).

Factors of Production: *(also called 'Economic Resources')*

Factors of production are goods and services which are used to producer other goods i.e. Land, Labor, Capital and Enterprise.

Land:

Land means God-made natural resources of Earth, including:

- Non-renewable resources (e.g. natural gas, oil, coal, minerals, precious metals)
- Renewable resources (wood, agricultural products, wind power, tidal power, hydro-electric power)
- Surface of Earth (used for farming, housing, factories, roads)
- Environmental resources (e.g. clean air, water)

Labour:

Labor is the human time spent in production e.g. workers in the factory, teachers in the college. Productivity of labor can be enhanced by proper education, training, division and specialization of labor.

Specialization

Specialization occurs when workers use specialized skills and knowledge for completing specific tasks.

Benefits of Specialization:

- Specialization reduces time required for production as worker does not have to switch from one task to another.
- Specialization increases efficiency and productivity as worker performing one task repeatedly becomes highly skilled at that specific task with increased efficiency rate.
- Specialization decreases average cost and firm experiences economies of scale.
- Specialization promotes invention.

Division of Labor

Division of labor refers to dividing the process of production into number of specialized tasks and assigning each task to a particular set of labor. For example, process of creation of a pencil is divided into different tasks e.g. cutting of trees, processing of wood, assembling pencil with graphite, and rubber.

Benefits of Division of labor:

Division of labor allows people to do specified tasks at which they are good, rather than doing everything in a mediocre way.

Capital:

Capital means man-made physical goods which are used to produce other goods and services. Examples include Factory Building, Machinery, Equipment, Transportation network (road, rail etc.), hospitals and schools.

Capital Formation and its Stages

Capital formation means increase in stock of capital goods in an economy which are used for production of other goods.

Stages of Capital Formation:

1st Stage: Creation of savings	Savings are done by individuals or households. They save by not spending their income. Level of saving in a country depends on ①Average level of income, ②Motivations for savings, ③Net wealth, ④Interest rate and ⑤Institutional factors.
2nd Stage: Mobilization of savings	Mobilization means transfer of saving from households to business entrepreneurs who require it for investment. Savings are mobilized through Capital Market. If rate of capital formation is to be increased, development of capital market is necessary in which Investors, Banks, Non-banking financial institutions provide funds to Corporations.
3rd Stage: Investment of savings	For capital formation, savings must be invested by entrepreneurs who are willing to take risks. Level of investment in a country depends on ①Marginal Efficiency of Capital (i.e. expected rate of profit), and ②Rate of Interest in market.

Enterprise (or Entrepreneur):

Enterprise is the person who organizes other factors of production, supervises them and takes risk of the business

He undertakes to remunerate all the factors of production, and residual (i.e. profit) is his reward.

Rewards (or Income) of Factors of Production:

Rent: *(reward of Land)*
Rent is the payment for the use of factors of production that are fixed in supply (i.e. Land).

Wages: *(reward of Labor)*
Wages is the amount paid under contract by an employer to a worker for services rendered.

Interest: *(reward of Capital)*
Interest is the price paid for the use of capital.

Profit: *(reward of Enterprise)*
Profit is the reward for the entrepreneur for taking risk.

Examples of Factors of Production in different Businesses:

	Making a Textbook	House Cleaning
Land	Wood to make paper	Raw material to clean products
Labor	Author	Cleaner using his skill
Capital	Machine to compile book	Products used to clean
Enterprise	Owner of the business who organizes the factors of production	Owner of the business who organizes the factors of production

Study Tip: Derived Demand

Demand for factors of production is called derived demand. This means that they are required to meet the demand for other goods e.g. Land has a derived demand which depends on the demand for what is grown on it.

CONCEPT REVIEW QUESTION

Q. 7
What is meant by Economic Resources? Explain different categories of Economic Resources. **(10)**
(PIPFA-Summer 2018)

Q. 8
Describe the term 'Land' as a factor of production.
(ICAP, CAF 02 Level – Spring 2008)

Q. 9
What do you understand by the term 'Capital formation'? Briefly describe the stages involved in the process of capital formation. **(04)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 10
What do you understand by the term Division of Labour?
(ICAP, CAF 02 Level – Spring 2012)

Q. 11
What do you understand by the term 'Factors of production'? What types of factors of production are used by a school? **(03)**
(ICAP, CAF 02 Level – Spring 2017)

Q. 12
Name four factors of production and their respective rewards. **(08)**
(Institute of Chartered Accountants in Malawi – June 2014)

Q. 13
Write short notes on:
(a)Wages
(b) Interest
(c)Profit
(ICAP, CAF 02 Level – Autumn 1997)

LO 8: PRODUCTION POSSIBILITY FROENTIER/CURVE:

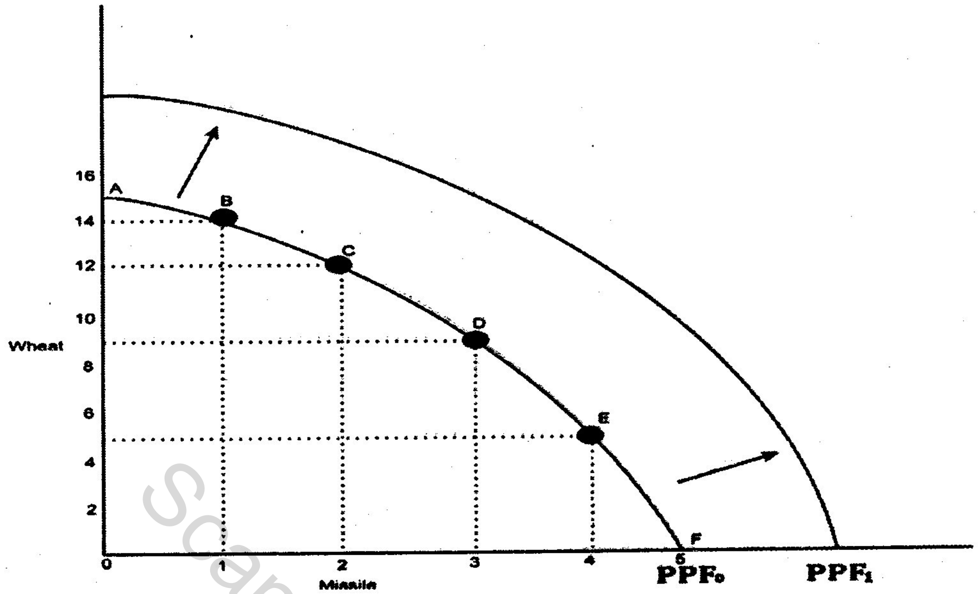
Definition:

A Production Possibility Frontier/Curve (PPF or PPC) shows different combinations of two goods that an economy can produce when all resources are fully and efficiently applied.

Schedule, Diagram and Explanation:

Possibilities	Missile	Wheat
A	0	15
B	1	14
C	2	12
D	3	9
E	4	5
F	5	0

Diagram and Explanation:



Explanation:

1. For the purpose of simplicity, we assume that all resources are applied to produce two goods only i.e. Wheat and Missile.
2. This frontier shows all possible options which a society can **choose** to substitute Wheat for Missiles.
3. Points outside the frontier are unattainable because of **scarcity** of resources. Any point inside the curve indicates that the economy has not produced efficiently.

Characteristics of PPC:

PPF has two characteristics:

1. **It has downward slope:**
   Because to increase production of one good, resources will be shifted from other good which will decrease production of other good.

2. **It is concave to the origin:**
   Because Marginal Rate of Product Transformation/MRPT (i.e. Opportunity Cost) increases along the curve. This is so because some resources are more efficient at producing one good and some are more efficient at producing the other good. (PPF will be a straight line if all resources are equally efficient.)

Opportunity Cost and PPF:

PPF is the menu of **Choices** of products i.e. i.e. an economy can choose any point on PPC to produce e.g. B or C or D. Every choice has an **Opportunity Cost** e.g. if option D is selected instead of option C, opportunity cost of producing 1 more unit of Missile will be 3 lost units of Wheat.

> **Marginal Rate of Product Transformation (Other name of Opportunity Cost)**
> **MRPT is the amount of one good which must be foregone to produce one unit of the other good.**

Efficiency and PPF:

PPF shows concept of **Economic Efficiency.** Each point <u>on</u> PPF shows production which is obtained using all resources efficiently. Points <u>inside</u> PPF are attainable but they are inefficient points.

Shift in PPF: *(i.e. Growth in economy)*

PPC can shift outwards under following conditions:

- Increase in Natural resources (e.g. Oil, Gas, Coal, Other mineral resources)
- Increase in Quantity and Quality of Labor (i.e. education, skill, discipline)
- Increase in Supply of Capital (i.e. factories, machinery, intellectual property)
- Development in Entrepreneurship and Technology (Innovation, Technological improvement, and increased efficiency)

CONCEPT REVIEW QUESTION

Q. 14

Draw and briefly explain the "Production Possibility Curve". **(07)**

(ICAP, CAF 02 Level – Spring 2011)

(ICAP's Official Question Bank for CAF 02 – Q. # 1.2)

Q. 15

Briefly discuss how the concept of PPC is useful in explaining the economic concept of 'scarcity'. **(03)**

(ICAP, CAF 02 Level – Autumn 2016)

Q. 16

(a) What do you understand by the term "Production Possibility Curve" (PPC)? Why is PPC downward sloping and concave to the origin? **(04)**

(b) Under what conditions would PPC shift outwards? **(03)**

(ICAP, CAF 02 Level – Spring 2015)

Q. 17

What is Opportunity Cost? Explain: why does Opportunity Cost increase along with the Production Possibility Curve?

(PIPFA - Winter 2017)

Q. 18

Following data relates to a country Ruritania which is capable of producing the following combinations of consumer goods and capital goods with a given quantity of resources and technology:

Consumer goods	140	120	100	70	0
Capital goods	0	60	80	100	120

Required:

(i) With the help of above data, draw a production possibility curve. **(03)**

(ii) Ruritania, after full utilization of its resources, is currently producing 70 units of consumer goods. What would be the opportunity cost to Ruritania in terms of capital goods if it decides to produce 50 more units of consumer goods? **(01)**

(ICAP, CAF 02 Level – Spring 2018)

PART D – ECONOMIC SYSTEMS

LO 9: THREE TYPES OF ECONOMIC SYSTEMS:

An **economic system** is a system which resolves the basic economic problem by making **three resource allocation decisions** i.e. what to produce, how to produce, and for whom to produce.

There are three economic systems:

1. Free/Market Economy(e.g. Capitalism)
2. Planned/Command Economy (e.g. Socialism or Communism)
3. Mixed Economy

Market Economy:

What is a market economy:

In a free market economy all resources are in the hands of individuals and firms, and they take basic decisions through market forces, without intervention of government (called price mechanism or market mechanism).

USA has an economy close to market economy.

How market economy resolves basic economic problems: (or Resource Allocation)

- What to produce:
  What to produce is determined by consumer demand. Firms produce the commodities that are in highest demand and give the highest prices.

- How to produce:
  How to produce is determined by cost. Producers use those factors of production and production techniques which provide least cost.

- For whom to produce:
  For whom to produce is determined by purchasing power. Production is made only for those who have the ability and willingness to pay.

Features:

- Laissez Faire (Let-us-Free) approach. (means transactions in market should be free from government intervention e.g. tarrifs and subsidies, regulations regarding price or wages)
- Price/Market Mechanism.
- Private ownership of factors of production.
- Economic decisions are based on self-interest and profit motives.

Benefits/Advantages:

- Retains consumer sovereignty
- No costly planning of bureaucracy
- Dynamic and responsive to changes in demand and supply conditions
- Freedom of choice for consumers
- Freedom of entrepreneur
- Surplus or shortage in market is automatically removed through Price-Mechanism.

Drawbacks/Disadvantages:
- Unequal distribution of wealth.
- Social Costs of production and consumption are ignored.
- Danger of emphasis on luxuries rather than necessitates.
- Failure to plan long-run.
- Creation of Monopolies
- Risk of Unemployment and Inflation
- duplication and waste of resources

Planned Economy:

Definition:

It is an economic system in which all important decisions about resource-allocation are made by government, instead of markets.

North Korea is a planned economy.

How planned economy resolves basic economic problems: (or Resource Allocation)

- What to produce:
  What to produce is determined by Government. Government decided what is a common good which should be produced.

- How to produce:
  Government owns all factors of production. Governments factors of production and production techniques considering social costs e.g. environment pollution, unemployment.

- For whom to produce:
  Government produces for the entire economy through an administrative process.

Features:
- Resources are state-owned.
- Government decides what to produce, how to produce and for whom to produce.
- State decides pricing of factors of production.
- Government produces for the entire economy through an administrative process.

Benefits/Advantages:
1. The social costs of production and consumption are fully considered in economic decisions.
2. Production is carried out for the needs of society and not for the benefit of the few.
3. Permits long term industrial and social planning fostering economic stability.
4. Full employment of the workforce is possible.
5. Less duplication and waste of resources.
6. Promotes equal distribution of wealth.

Drawbacks/Disadvantages:
1. There is a limited variety of products as compared to market economy.
2. Central planning reflects preferences of central planners rather than preferences of society.
3. Consumers have less sovereignty (i.e. power to determine what goods and services should be produced).
4. Bureaucratic and slow to respond to changing needs or technology.
5. Likelihood of corruption.
6. Lack of profit motive and lack of competition makes the economy inefficient.

Mixed Economy:

Definition:

It is an economic system in which decisions about resource-allocation are made partly by Government and partly by market-forces of demand and supply.
Most of the countries (like Pakistan) in the world are mixed economies.

Features/Role of State:

1. **Price and Supply Control**
   Government controls prices and supply of certain essential goods e.g. water, public transport, electricity. Government usually becomes suppliers of these goods.

2. **Prevention of Surplus and Shortage of goods**
   Government tries to prevent and remove disequilibrium in market through 'Buffer Stock Schemes' and Subsidies or taxation system.

3. **Regulations over Commercial Activities to protect society at large**
   - Economic regulations regarding wages-setting, standards for quality of goods and working-safety standards.
   - Social regulations to protect public health and safety and environment.
   - Govt. encourages competition to avoid monopoly.

4. **Fiscal Policies to achieve economic objectives:**
   Government uses fiscal policies to achieve objectives e.g. ①Low Inflation, ②Low Unemployment, ③Economic Growth, ④Equilibrium in Balance of Payment, and ⑤Equilibrium in Fiscal Budget.

Advantages:

- Retains dynamism of private sector.
- Public interest guarded by legislation and regulations by state.

Disadvantages:

- State may regulate economy for political purposes.
- Responsibility for economic performance is unclear.
- Government intervention creates costs and uncertainty.

CONCEPT REVIEW QUESTION

Q. 19
Mixed economy is a system in which free markets coexist with government intervention. Explain the role of the government in a mixed economy.
(06)
(ICAP, CAF 02 Level-Spring 2019)

Q. 20
What do you understand by the term 'Planned economy'? How resource allocation choices are made in a planned economy? Also state any three benefits of planned economy.
(05)
(ICAP, CAF 02 Level – Autumn 2017)

Q. 21
What is Free Market Economy? Enlist four drawbacks of Free Market Economy.
(04)
(PIPFA – Winter 2017)

Q. 22
What are the fundamental problems of an economy? How could these problems be resolved under free market economy?
(10)
(PIPFA - Summer 2017)

Q. 23
Explain the role of State in a mixed economy. **(08)**
(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 1.1b)

Q. 24
Explain how the price system works to allocate resources in a market economy.
(ICAP's Official Question Bank for CAF 02 – Q. # 2.4a)

Q. 25
In view of the scarcity of means and the multiplicity of ends, the economic problem lies in making the best possible use of resources to get maximum satisfaction. Briefly discuss how resources are allocated under different economic systems to optimize their use. **(06)**
(ICAP, CAF 02 Level – Autumn 2015)

LO 10: ISLAMIC ECONOMIC SYSTEM:

Features of Islamic Economic System:

Allah is the sustainer:
Allah has created all the resources and He feeds all creature including human being. However, Islam encourages people to do their best to earn a livelihood.

God is the true owner of everything:
Human beings are only trustee of resources. Although, they have authority to use resources according to certain principles.

State ownership of resources:
A state can own resources and enterprise. However, a free market can also exist where entrepreneur can earn profit.

Practising of moderation:
Islam teaching middle-way and fair distribution of resources. People are taught to share wealth.

Prohibition of charging interest (Riba):
It is forbidden for the lending party to earn interest on investment. Both parties must share risk and rewards.

Earnings from Halaal activities only:
Earnings should be made only from goods or services which are allowed in Islam.

Hoarding of wealth is discouraged:
Islam does not discourage acquisition of wealth. However, Islam discourages hoarding of wealth and encourages utilization of resources for welfare of society.

Zakat:
Zakat is a financial tax on wealthy people to help poor. It ensures equal distribution of wealth.

Comparison of Islamic Economic System and Capitalist Economic System:

Features	Capitalist Economics System	Islamic Economics System
Right to Ownership	Individuals have unlimited right to own private property. This may lead to wealth-concentration.	Islamic state has authority to nationalize private owned resources to prevent wealth concentration.
Monopoly	Private ownership of businesses results in Monopolies, Inflation and Unemployment.	Public-interest business are maintained by government or maintained under joint-ownership of government and private sector to balance the supply and demand.
Financial assistance	The interest is a source of capital formation in a capitalist society.	Charging Interest is abolished in Islam. Islam encourages Saving and Investment through Partnership and profit-sharing.
Economic Freedom	Capitalism's motive is only profit. Entrepreneurs are free to do any business to earn profit.	In Islamic system only "HALAL" goods/services are allowed to be produced and consumed. "HARAM" goods and services (like alcohol drinks, drugs) are not allowed to be produced and consumed.
Distribution of Wealth	Capitalism leads to unequal distribution of wealth because of concentration of wealth in few hands.	Islam discourages to hoard wealth and encourages to share wealth for welfare of society. Due to "ZAKAT" and "SADQAT" wealth automatically transfer from rich to poor.
Relative Scarcity	Capitalism is based on belief that resources are scarce. Therefore, a minority group with wealth hoards most of the wealth and other population cannot fulfil even its basic needs.	Islam is based on belief that there are more than enough resources to satisfy needs of all. Everyone should be both producing and consuming to ensure access to these resources.
Role of Government	In capitalism, there is no or minimum role of government.	In Islamic System, state ensures that public interest and welfare is protected in markets.
Exploitation	Common exploitation of the weak.	Attempts to minimize human exploitation.

Sharia Law:
Sharia Law is the branch of law which incorporates principles of Islamic economics into law e.g. under sharia law:
1. Wealth should be generated through investment in halal assets and trade.
2. Interest is prohibited.
3. Investment in companies engaged in haram activities (e.g. gambling, alcohol) is prohibited.
4. Short-selling and non-asset backed derivatives are prohibited.

Islamic Financing:
Profit and Loss based Financing:

1. **Mudaraba:**
   Mudaraba is a kind of partnership where one partner provides capital and other partner provides its expertise and management.
   Profits generated are shared between the parties according to a pre-agreed ratio. If there is a loss, the first partner will lose his capital, and the other party will lose the time and effort invested in the project.

2. **Musharaka:**
   Musharakah is a kind of partnership where two or more parties contribute capital to a business and divide the net profit or loss proportionately. All the providers of capital are entitled to participate in management.

Asset-backed financing:

1. **Murabaha:**
   Murabaha means "contract for sale". The bank buys some good (e.g. home, car, business supplies) at the request of a customer and sells it to customer at a higher price. Customer makes payment on deferred basis.

2. **Ijara:**
   Ijarah means "to give something on rent". The bank buys the asset which customer wants to lease, and then leases to customer for agreed time period against periodically rental payments.

Ijara-wa-iqtina

It means "lease and ownership". This is a type of ijara followed by sale of leased asset to the lessee.

CONCEPT REVIEW QUESTION

Q. 26

Briefly describe any four core features of Islamic economic system. **(04)**

(ICAP, CAF 02 Level - Spring 2017)

Q. 27

(a) Explain how the Islamic religion has impacted upon its economic system.
(b) What are its similarities and differences with the free market economic system?

(ICAP's Official Question Bank for CAF 02 – Q. # 1.4)

CHAPTER TWO

MICROECONOMICS

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
LO 1	TYPES OF GOODS	2.2.5, 2.2.6, 2.3.7, 2.3.8	2.1, 3.7a
PART A – THEORY OF DEMAND			
LO 2	DEMAND AND ITS DETERMINANTS	2.1.2, 2.1.4, 2.1.6, 2.2.3, 2.2.5, 2.2.6, 2.2.7, 2.2.8, 2.2.9	1.1a, 5.12a
LO 3	LAW OF DEMAND (EFFECT OF PRICE ON DEMAND)	2.2.2, 2.2.10, 2.2.11, 2.2.12	N/A
PART B – THEORY OF SUPPLY			
LO 4	SUPPLY AND ITS DETERMINANTS	2.1.5, 2.3.1, 2.3.3, 2.3.5, 2.3.6, 2.3.7, 2.3.8, 2.3.9, 2.3.10	2.2
LO 5	LAW OF SUPPLY (EFFECT OF PRICE ON SUPPLY)	2.3.2, 2.3.11	N/A
PART C–THEORY OF MARKET EQUILIBRIUM			
LO 6	MARKET EQUILIBRIUM/LAW OF PRICE	2.4.1, 2.4.2	5.15a
LO 7	MARKET DISEQUILIBRIUM	2.4.3	N/A
PART D– CHANGE IN MARKET EQUILIBRIUM			
LO 8	DIFFERENCE BETWEEN "MOVEMENT ALONG DEMAND CRUVE" AND "SHIFT IN DEMAND CURVE"	2.2.4, 2.3.4	2.3
LO 9	CHANGE IN MARKET EQUILIBRIUM (EFFECT OF DEMAND/SUPPLY ON PRICE)	2.4.4	N/A
PART E– SPECIAL MARKETS			
LO 10	MARKET FOR PERISHABLE GOODS	2.4.5	N/A

*** October 2016 Edition*

LO 1: TYPES OF GOODS:

Goods are tangible items that satisfy human wants. Services are intangible items that satisfy human wants.
Goods can be classified between various types e.g. from consumers' point of view, from producers' point of view, or from government's point of view.

Goods from Consumers' Point of View

Normal, Inferior and Superior Goods:

Inferior goods:
Inferior Goods are those whose demand decreases as income of consumer increases e.g. public transport, wool, second-hand products. Y_{ED} of inferior goods is negative.

Normal goods:
Normal Goods are those whose demand increases as income of consumer increases e.g. milk, silk. Y_{ED} of normal goods is positive.

Superior goods:
Superior Goods are those whose demand increases by larger portion as income of consumer increases e.g. a luxury car. Y_{ED} of superior goods is greater than 1.

Independent and Related Goods:

Independent (or Unrelated) Goods:
Independent Goods are those goods for which demand (or price) of one good does not affect demand of other good. e.g. Shoes and fan, Chair and watch, Pen and Coffee.

Related Goods:
Related goods are those goods for which demand (or price) of one good affects demand of other good. There are two types of Related Goods i.e.

1. **Complementary/Complement Goods:** *(or goods in 'joint demand')*
   These are goods which are consumed together. Decrease in price of one good (or increase in the demand of one good) leads to increase in demand for the other good. e.g. hockey sticks and hockey balls, golf clubs and golf balls, computers and computer cases, cricket ball and cricket bat, tea and sugar. X_{ED} of complement goods is negative.

2. **Substitute goods/Competitive Goods:** *(or goods in 'competitive demand')*
   These are goods which satisfy the same need. Decrease in price of one good (or increase in the demand of one good) leads to decrease in demand for the other good e.g. tea and coffee, butter and margarine, Canon camera and Kodak camera, mutton and chicken, milk chocolate and dark chocolate. X_{ED} of substitute goods is positive.

Free Goods and Economic Goods:

Free goods:
Those goods are in abundant supply, and have no opportunity cost e.g. Air, Sunlight, Ocean-water.

Economic goods:
These goods are scarce, and have opportunity cost. Most goods we consume are economic goods e.g. mobile phone, shoes, car.

Goods from Producers' Point of View

Substitute in production and complements in production:
Complements in Production *(also called 'goods in joint supply')*:
Complements in production are those goods which are produced together in the same production process e.g. beef and leather (both produced from cow).

Substitutes in production: *(also called 'goods in competitive supply')*
Substitute in production are those goods which are produced by a firm as alternatives using the same factors of production e.g. a firm selling black printer and colour printer, or a firm selling refrigerators and air-conditioners.

Goods from Government's Point of View

Merit Goods, and Demerit Goods:
Merit Goods are socially desirable goods because they contribute to the social welfare. They create positive externalities. Examples include Education, Health, Parks.

Demerit Goods are socially undesirable goods because they are harmful for the society. They create negative externalities. Examples include Cigarette, Alcohol.

Public Goods, Private Goods and Club Goods:
Private goods are those goods which have characteristics of:
- Rivalry (i.e. consumption by one person reduces availability for others), and
- Excludability (i.e. it is possible to exclude individuals who have not paid from enjoying it).

Examples include Apple, Burger, Mobile, Clothing and other goods that can be purchased in a store.

Public goods are those goods which have characteristics of:
- Non-rivalry (i.e. consumption by one person does not reduce availability for others), and
- Non-excludability (i.e. it is impossible to exclude individuals from enjoying it).

Examples include National Defense System, High-ways, Public Parks, Street-lights, Roads.

Club Goods are non-rivalry but excludable. Examples include Golf clubs, Private Parks (e.g. Joyland), Cinema.

Summary:

Private Goods	Rivalry	Excludability
Public Goods	Non-Rivalry	Non-Excludability
Club Goods	Non-Rivalry	Excludability

Inferior Goods	YED is "-".
Normal Goods	YED is "+".
Superior Goods	YED > 1

Complementary Goods	XED is "-".
Substitute Goods	XED is "+". 1
Independent Goods	XED is "0".

e Goods	Abundant supply
nomic Goods	Limited supply

Merit Goods	Desirable, welfare, positive
Demerit Goods	Undesirable, harmful, negative

Complement in production	produced together
Substitute in production	produced as alternative

CONCEPT REVIEW QUESTION

Q. 1
What do you understand by the term 'Goods' as commonly used in economics? Briefly describe 'Public goods' and give two examples of public goods. **(03)**
(ICAP, CAF 02 Level-Spring 2019)

Q. 2
Define Complementary Goods. **(02)**
(PIPFA – Winter 2015)

Q. 3
Differentiate between substitute goods, complimentary goods and independent goods. Give two examples of each. **(06)**
(ICAP, CAF 02 Level- Spring 2009)
(ICAP's Official Question Bank for CAF 02 – Q. # 2.1)

Q. 4
What is meant by the terms "substitute goods" and "complementary goods"? Give an example of each related to petroleum products. **(06)**
(ICMA Pakistan – Summer 2012)

Q. 5
What is meant by "Competitive goods" and "Complementary goods"? Give two examples of each. **(04)**
(ICAP, CAF 02 Level- Autumn 2011)
(ICAP's Official Question Bank for CAF 02 – Q. # 3.7a)

PART A – THEORY OF DEMAND

LO 2: DEMAND AND ITS DETERMINANTS:

Demand:
Demand is the quantity of a good which buyers are willing and able to buy at different price levels.

Study Tips
1. **Needs** are basic requirements of a society i.e. food, cloth and shelter. **Wants** are desires of society.
   Demand = Needs/Wants + Purchasing Power
2. Demand by a single individual is called "Individual Demand". Sum of all the individuals' demands for a particular good or service is called "Market Demand".

Determinants of Demand:

Price of the product:
Price is a primary determinant of demand. If price of a product decreases, its quantity demanded increases *(and vice-versa).*

Income of consumers:
- If income of consumers increases, demand for normal goods increases *(and vice-versa).*
- If income of consumer increases, demand for inferior goods decreases *(and vice-versa).*

Study Tip – Difference between Income and Wealth
Income is the money that is earned by a factor of production at any given point of time e.g. rent, wages.
Wealth is the accumulated income that has been saved and stored. It is the difference between total assets and total liabilities e.g. house, car, land.

Price of Complementary Good:
If price of complement good increases, demand for the main product (under examination) decreases.

Price of Substitute Good:
If price of substitute good increases, demand for the main product (under examination) increases.

Population or Number of Buyers:
If number of buyers in a market increases, demand for the product will also increase *(and vice-versa).*

Future expectation about Prices and Shortage
- If increase in price of product is expected, current demand for the product will increase *(called pre-emptive purchase).*
- If a shortage of product is expected in future, current demand for the product will increase.

Tastes or Preferences:
Our tastes and preferences change due to change in culture, fashion, special occasions, weather or season. This will cause change in demand for a product.

Advertisement:
A successful advertisement will increase the demand.

Availability of credit facilities:
Availability of credit facilities increases demand.

Exam Tip
Examiner may give you any one or two determinants and may ask you to describe effect of increase or decrease on demand (read requirement carefully in such case).

CONCEPT REVIEW QUESTION

Q. 6
Explain any four factors on account of which the demand of a product may change even when its price remains the same. **(06)**
(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 1.1a)

Q. 7
What exactly is meant by Demand in Economics? What is the difference between Demand and Want?
(ICAP, CAF 02 Level – Autumn 1990)

Q. 8
Describe consumption goods and state the main determinants of demand for these goods. **(02)**
(ICAP, CAF 02 Level – Spring 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.12a)

LO 3: LAW OF DEMAND (EFFECT OF PRICE ON DEMAND):

Any law in economics can be presented in 3 ways i.e. Descriptive Form, Tabulation Form (i.e. Schedule, or numeric example) and Graphical Form (i.e. diagram).

Description of the Law of Demand:

If price of a product increases, its quantity demanded decreases; and if price of a product decreases, its quantity demanded increases (*ceteris paribus*).

> **Study Tips**
> "*Ceteris Paribus*" means assumption that other factors/determinants remaining same/equal/constant/unchanged.

Assumptions of Law of Demand:

1. Income of consumers does not change.
2. Price of Complimentary Goods or Substitute Goods do not change.
3. Population/Number of buyers does not change.
4. Future Expectation about Price or Shortage does not change.
5. Tastes or preferences of society do not change.
6. Advertisement does not change.
7. Availability of credit facilities does not change.

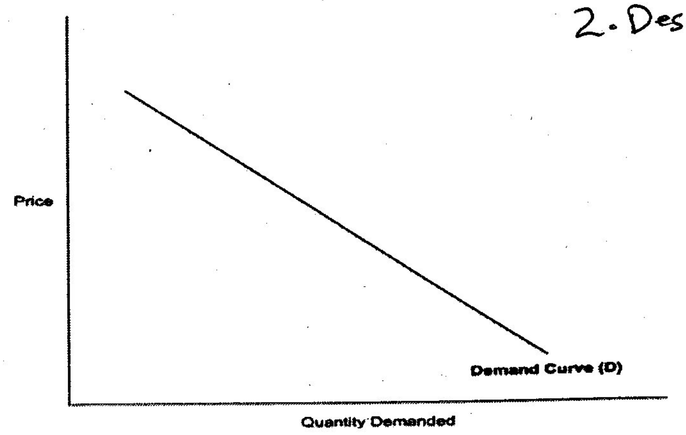
Tabulation of the Law (i.e. Demand Schedule):

The demand schedule shows how much of a good consumers are willing and able to purchase at different prices.

Price	Quantity Demanded
1	5
2	4
3	3
4	2
5	1

Graphical presentation of the Law i.e. Demand Curve:

1. Describe axis
2. Describe curve



Explanation:

1. At X-axis we show Quantity Demanded, and at Y-axis, we show Price.
2. The line D is called Demand Curve. Demand curve is a graph that shows how much quantity of a good is demanded by consumers at different prices.
3. Slope of demand curve is negative/downward which shows inverse relationship between Price and Quantity Demanded.

Study Tips
No number/figures are required to be specified alongwith axes of any diagram in economics.

Why is slope of demand curve negative:

Following are reasons of downward (or negative) slope of Demand Curve:

a. Income Effect (As price decreases, existing consumers buy more of this product because their purchasing power/real income increases.)
b. Substitution Effect (As price decreases, some new consumers will shift to this lower priced good.)
c. Law of Diminishing Marginal utility.

Practical Importance of the Law of Demand:

1. Law of demand determines price of the product in market.
2. Demand schedule helps the producers to plan for future by analyzing the impact of change in prices on the quantity demanded
3. It also helps state in raising taxes e.g. if increase in tax decreases demand significantly, it is not wise to increase tax as overall amount will decrease.

Limitations and Exceptions of the Law of Demand:

There are certain cases wherein the law of demand does not apply. These limitations and exceptions described below.

Change in trends:

A product in fashion will have more demand even if its price is going up.

Change in income:

If income of consumers has increased, demand of product will increase even if its price is going up.

Future Expectation of Shortage:

If there is an expectation of shortage of goods in future, demand of product will increase even if its price is going up.

Future Expectation of Price increase:

If there is an expectation of higher prices in future, demand of product will increase even if its price is going up.

Basic necessities of life:

People keep on buying basic necessities of life (e.g. sugar, rice, medicines) regardless of its prices.

Giffin goods: *(main exception of Law of Demand)*
A Giffen Good is a type of inferior goods whose demand increases if its price increases.

Suppose a family is spending its income on two goods bread (inferior good) and meat (normal good). If price of bread increases, family will increase consumption of bread because:

- Consumer does not have any other cheaper good to substitute for it (substitution effect).
- Consumer has less real income to spend, therefore he will reduce the consumption of meat and increase the consumption of bread to meet its monthly needs (income effect).

Study Tip – Price rise in housing market

Often we observe if price of houses rise, demand for houses still goes up. It does not mean that houses are giffen goods. Rather, reasons are:

1. Houses are not homogenous produces. Their prices differ because they differ in design, construction material and location etc.
2. Non-price determinants also affect demand e.g. population, availability of borrowing.

CONCEPT REVIEW QUESTION

Q. 9

(a) Describe the law of demand. Support your answer with the help of a diagram. **(05)**

(b) Briefly describe any four exceptions to the law of demand. **(06)**

(ICAP, CAF 02 Level – Autumn 2017)

Q. 10

What is the usual shape of Demand Curve, and Why?

(ICAP, CAF 02 Level – Spring 1997)

Q. 11

What is the relation of law of demand to the principle of diminishing utility?

(ICAP, CAF 02 Level – Autumn 1998)

PART B – THEORY OF SUPPLY

LO 4: SUPPLY AND ITS DETERMINANTS:

Supply:

Supply is the quantity of a good which sellers are willing and able to sell at different price levels.

Study Tip

Stock is the quantity of goods available to firm. Firm may not supply all of its stock to market.

Determinants of Supply:

Price of the product:

Price has positive effect on supply i.e.

- if price of a product increases, its quantity supplied increases.
- if price of a product decreases, its quantity supplied decreases.

Study Tip – Reserve Price

Reserve Price (or Reservation Price) is the minimum price a firm is willing to receive for its good. It indicates the price level below which it is not acceptable for a firm to supply to the market.

Following **factors** affect level of reservation price:

1. Cost of production (Higher cost of production would lead to a higher reservation price, and vice-versa)
2. Income of the consumer (Every individual has a different reservation price set for the same commodity depending upon the amount of his income.)
3. Availability of substitute goods (If the substitutes are available, firm might need to set lower reservation price for its product and vice versa).
4. Nature of objectives of firms or marketing strategies of firms (a new firm may set low reserve price to capture the market).

Other factors may include regulations, amount of subsidies, taxes, inflation, economic conditions etc.

Availability, and Quality of Factors of Production

Availability of factors of production (e.g. discovery of natural resources), or quality of factor of production (e.g. specialization of labor) increases supply.

Cost of Inputs (or Cost of Factors of Production)

If cost of inputs for a production (e.g. rent, wages or interest) increases, supply of the product will decrease.

Technology

Advancements in technology increases efficiency and productivity in production and increases supply e.g. using machines instead of labor increases supply.

Indirect taxes and Subsidies on Product

If indirect tax is imposed on a product, it will increase cost and will decrease supply *(and vice-versa).*

If subsidy is granted on a product, it will decrease cost and will increase supply *(and vice-versa).*

Study Tip – Indirect Tax and Subsidy

Indirect tax is a tax on production or consumption of a product. **Subsidy** is a contribution by government to encourage production and consumption of beneficial products.

Environmental conditions

Unfavorable conditions adversely affect supply, particularly for agricultural products. These conditions may be:

- Bad weather.
- Diseases in livestock and corps
- Natural disasters and wars

Price of complements in production

If price of complement in production increases, supply of main good (under examination) will also increase *(and vice-versa).*

Price of substitutes in production:
If price of substitute in production increases, supply of main good (under examination) will decrease *(and vice-versa)*.

Number of sellers in the market
If number of sellers in a market increases, supply for a product will also increase.

Time and Supply:
In short-run, supply cannot be increased beyond a certain limit. In the long-run, supply can be increased by increasing production facilities.

Therefore:
- if there is short-run increase in demand (e.g. increase in demand for umbrella in unexpected rainy season), supply is increased by using existing resources only.
- if there is long-run increase in demand (e.g. change in climate throughout the year), supply is increased by opening new factories.

CONCEPT REVIEW QUESTION

Q. 12
Briefly explain any five factors that are responsible for 'Change in Supply'. **(05)**
(ICAP, CAF 02 Level – Spring 2016)

Q. 13
According to the law of supply, supply of a product increases when the price increases. Briefly describe the other factors that affect the quantum of supply of a product. **(09)**
(ICAP, CAF 02 Level – Autumn 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 2.2)

Q. 14
What do you understand by 'Reservation price'? Briefly describe three factors which may affect the reservation price. **(05)**
(ICAP, CAF 02 Level – Spring 2017)

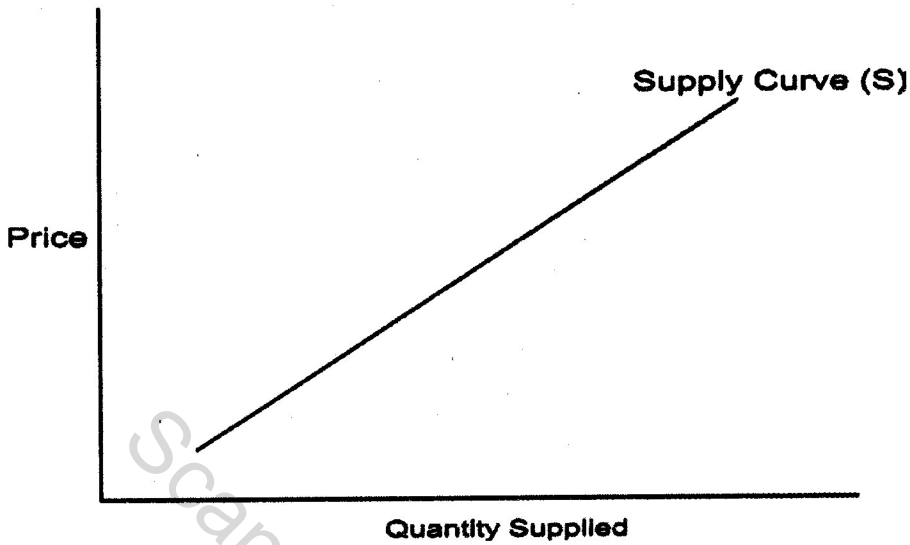
LO 5: LAW OF SUPPLY (EFFECT OF PRICE ON SUPPLY):

Description of the Law of Supply:
If price of a product increases, its quantity supplied increases; and if price of a product decreases, its quantity supplied decreases, *ceteris paribus*.

Tabulation of the Law (i.e. Supply Schedule):
The supply schedule shows how much of a good sellers are willing and able to sell at different prices.

Price	Quantity Supplied
1	1
2	2
3	3
4	4
5	5

Graphical presentation of the law (i.e. Supply Curve):



Explanation:

1. At Y-axis, we show Price and at X-axis we show Quantity Supplied.
2. The line S is called Supply Curve. Supply curve is a graph that shows how much quantity of a good is supplied by producers at different prices.
3. Supply Curve has upward slope showing positive relationship between price and quantity supplied.

Assumptions of Law of Supply:

1. Cost of factors of production remains same.
2. Availability of factors of production remains same.
3. Technology remains same.
4. Indirect taxes and Subsidies on product remain same.
5. Environmental conditions remains same.
6. Price of substitutes in production and complements in production remains same.
7. Number of sellers in the market remains same.
8. There is no discovery of natural resources.

Practical Importance of Law of Supply:

1. **Pricing:**
   Law of supply helps in determining equilibrium price of product.

2. **Focus:**
   Law of supply and its effect on price helps producers to find out as to which products to focus on.

CONCEPT REVIEW QUESTION

Q. 15
Enumerate the law of supply with a numerical example and graphical presentation. **(06)**
(ICMA Pakistan – Winter 2012)

PART C – THEORY OF MARKET EQUILIBRIUM

LO 6: MARKET EQUILIBRIUM/LAW OF PRICE:

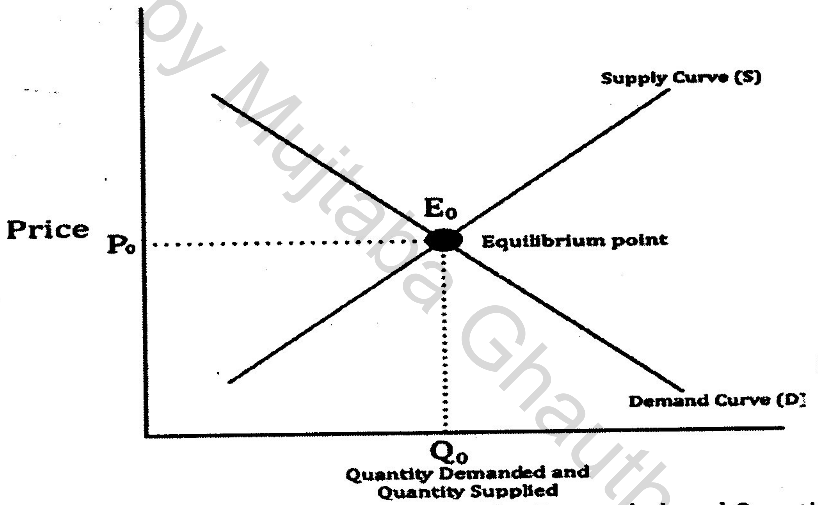
Law of Price/Market Equilibrium

In a free market, only that price prevails at which demand and supply are equal.

Tabulation of the Law:

Price	Quantity Demanded	Quantity Supplied
1	5	1
2	4	2
3	3	3
4	2	4
5	1	5

Graphical presentation of the law:



1. At Y-axis, we show Price and at X-axis we show Quantity Demanded, and Quantity Supplied.
2. The line D is called Demand Curve which is downward. The line S is called Supply Curve which is upward sloping.
3. Point at which demand equals supply is called Equilibrium Point.
4. Price at which demand equals supply is called Equilibrium Price/Market Clearing Price.
5. Quantity at which demand equals supply is called Equilibrium Quantity.

Study Tip – Equilibrium Price and Regulated Price

Equilibrium/Market Price:
Market Price is the price determined by market forces of demand and supply i.e. price where demand is equal to supply.

Regulated Price:
Regulated Price is the price fixed by government. Government can set a minimum price (to protect producers) or a maximum price (to protect consumers).

CONCEPT REVIEW QUESTION

Q. 16
Write short note on Equilibrium price.
(ICAP, CAF 02 Level– Spring 1999)

Q. 17
How do free forces of demand and supply determine equilibrium price and equilibrium quantity? Support your answer with the help of a diagram. (07)
(ICAP, CAF 02 Level – Spring 2012)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.15a)

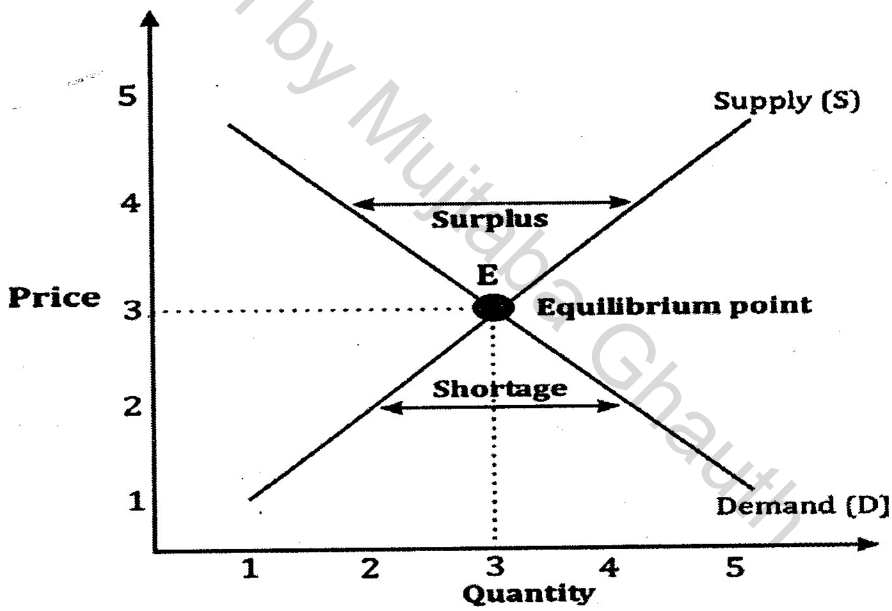
LO 7: MARKET DISEQUILIBRIUM:

What is a market disequilibrium:

Market is in disequilibrium if demand is not equal to supply.

1. If demand > supply, it is called Shortage (or excess demand).
2. If supply > demand, it is called Surplus (or excess supply).

Graphical presentation of market disequilibrium:



How market automatically reaches to equilibrium:

If a market is temporarily in disequilibrium, forces of demand and supply will automatically push market to equilibrium without interference from government.

If there is Shortage:

Suppose, initially price is at Rs. 2. At this price, demand is 4 but supply is 2 (and shortage of 2). Some consumers will be willing to pay higher price to get product for themselves. The higher price encourages producers to increase supply and forces consumers to decrease demand. Ultimately, price will stop rising at a point where demand is equal to supply.

If there is Surplus:
Suppose, initially price is at Rs. 4. At this price, demand is 2 but supply is 4 (and surplus of 2). Firms will reduce prices to sell their unsold stocks. The reduced price encourages consumers to increase demand and forces producers to decrease supply. Ultimately, price will stop decreasing at a point where demand is equal to supply.

CONCEPT REVIEW QUESTION

Q. 18
When the price is not at the equilibrium point there is a state of disequilibrium in the market. Explain with the help of a diagram, disequilibrium which may exist when the quantity demanded is not equal to the quantity supplied. State how forces of demand and supply may push prices from disequilibrium to equilibrium. **(06)**
(ICAP, CAF 02 Level – Spring 2014)

Q. 19
The price mechanism brings demand and supply into equilibrium. What do you understand by "market clearing price"? Illustrate graphically by showing shortage and surplus in the market? What might be the effect of shortage and surplus on the price? **(08)**
(ICMA Pakistan – Fall 2013)

PART D – CHANGE IN MARKET EQUILIBRIUM

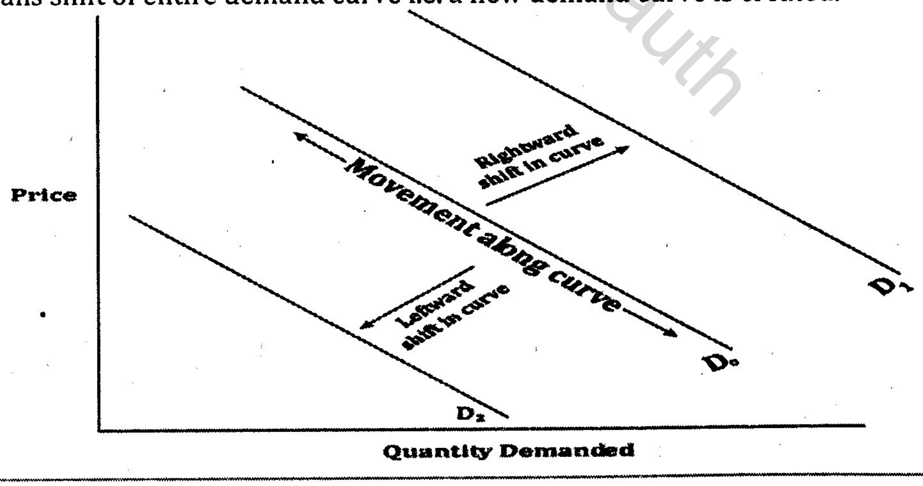
LO 8: DIFFERENCE BETWEEN "MOVEMENT ALONG DEMAND CRUVE" AND "SHIFT IN DEMAND CURVE":

Movement along demand curve (also called change in 'quantity demanded'):

1. Change in demand due to change in own price of the product is called 'movement along demand curve' (or 'extension-contraction' or 'rise-fall' of quantity demanded).
2. It means movement from one point to another point on the same demand curve.

Shift in demand curve (also called 'change in demand'):

1. Change in demand due to change in non-price determinants (or 'conditions') of demand is called 'shift in demand curve'.
2. It means shift of entire demand curve i.e. a new demand curve is created.



Study Tips
Same concept applies to Supply i.e. difference between "change in quantity supplied" and "change in supply".

CONCEPT REVIEW QUESTION

Q. 20
What do you understand by 'Change in Quantity Supplied' and 'Change in Supply'? **(02)**
(ICAP, CAF 02 Level – Spring 2016)

Q. 21
Describe the concept of 'change in supply' with the help of a diagram. **(05)**
(ICAP, CAF 02 Level – Spring 2019)

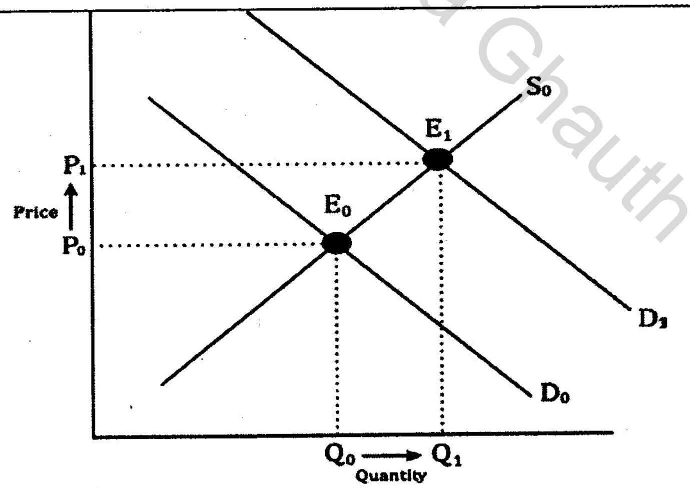
Q. 22
Explain with the help of a diagram the difference between shift of demand and movement along demand curve. **(04)**
(ICMA Pakistan – Summer 2010)

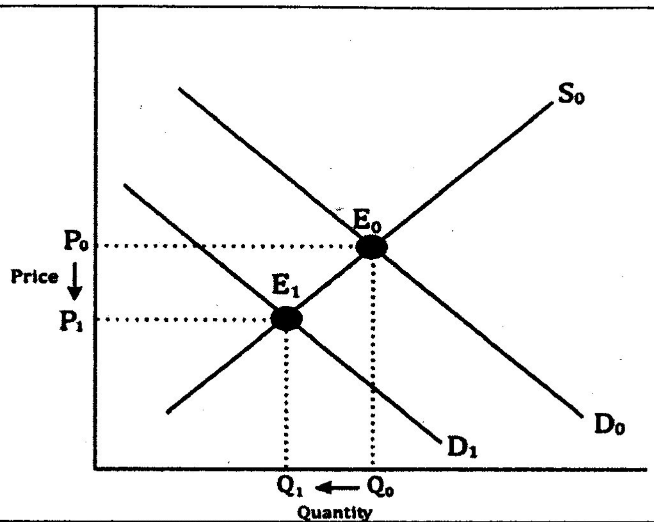
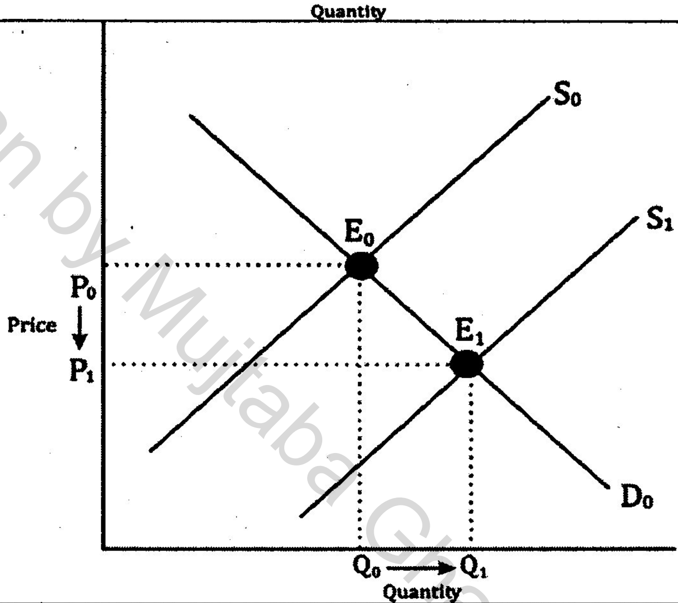
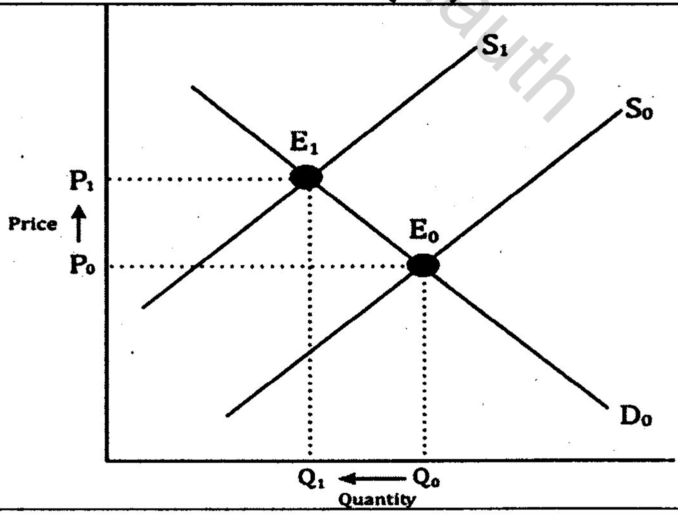
Q. 23
Explain what is Movement along the Demand Curve and Shift in the Demand Curve highlighting the difference between these two concepts. Also illustrate the difference by means of diagrams. **(09)**
(ICAP, CAF 02 Level– Autumn 2009)
(ICAP's Official Question Bank for CAF 02 – Q. # 2.3)

LO 9: CHANGE IN MARKET EQUILIBRIUM (EFFECT OF DEMAND/SUPPLY ON PRICE):

Reason of change in market equilibrium:
Equilibrium point changes when there is a change in non-price determinants of demand or supply (i.e. there is shift in demand curve or supply curve).

Effect of change in market equilibrium:
Change in market equilibrium affects equilibrium Price and equilibrium Quantity.

Situation	Graphical Presentation	Effect on Equilibrium
Rightward shift in Demand Curve: (i.e. increase in demand due to change in any of non-price determinants)		Quantity → Up Price → Up

<table>
<tr>
<td><u>Leftward shift in Demand Curve:</u>
(i.e. decrease in demand due to change in any of non-price determinants)</td>
<td>
</td>
<td>Quantity → Down
Price → Down</td>
</tr>
<tr>
<td><u>Rightward shift in Supply Curve:</u>
(i.e. increase in supply due to change in any of non-price determinants)</td>
<td>
</td>
<td>Quantity → Up
Price → Down</td>
</tr>
<tr>
<td><u>Leftward shift in Supply Curve:</u>
(i.e. decrease in supply due to change in any of non-price determinants)</td>
<td>
</td>
<td>Quantity → Down
Price → Up</td>
</tr>
</table>

Study Tips

1. In exam question, whenever you face a demand and supply problem, always draw a diagram on paper (if it is a theory based question) or in your mind (if it is MCQ type question).
2. In advanced questions, there may be simultaneous change in both Demand & Supply in single diagram.

CONCEPT REVIEW QUESTION

Q. 24 Lazim hai

Illustrate with the help of a diagram, how new equilibrium market price of a good is achieved when price of substitute good increases. **(06)**

(ICAP, CAF 02 Level – Spring 2015)

Q. 25

How would the demand for Article A change when the price of Article B goes up:

(a) When A and B are complements

(b) When A and B are substitutes

In answering parts (a) and (b) give appropriate examples of complements and substitutes. **(08)**

(ICAP, CAF 02 Level– Autumn 2003)

Q. 26

Show how the equilibrium price of a commodity changes (i) when its demand increased (ii) when its demand falls (iii) when its supply increases (iv) when its supply falls. **(04)**

(ICMA Pakistan – Fall 2011)

Q. 27

Below is the list of factors which may affect market equilibrium. Fill the table showing appropriate effect of the factor on market.

Factor	Affects demand or supply?	Shifts left or right?	Eq. Price increase or decrease?	Eq. Output increase or decrease?
You are analyzing market of margarine, and price of butter increases.				
Indirect tax is imposed on product				
You are analyzing market of beef, and price of leather increases.				
Subsidy is granted on producing units more than a certain level.				

PART E – SPECIAL MARKETS

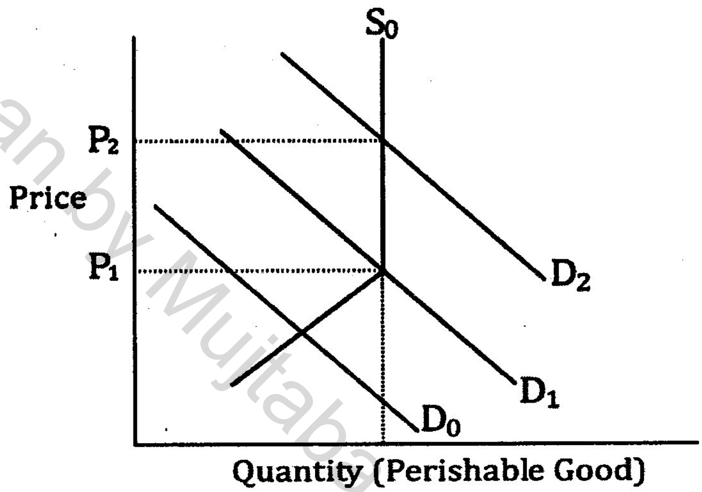
LO 10: MARKET FOR PERISHABLE GOODS:

Perishable goods:

Perishable goods are those goods whose value will decrease significantly by the passage of time e.g. foodstuffs.

Effect of Perishability of good on its supply:

The supply of perishable goods is considered *relatively inelastic* because suppliers cannot control its supply by storing it or producing it in short-run. Therefore, supply curve will eventually become perfectly inelastic. At this stage, price changes only due to change in demand.



CHAPTER THREE

ELASTICITY OF DEMAND AND SUPPLY

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A – PRICE ELASTICITY OF DEMAND			
LO 1	DEFINITION AND TYPES OF ELASTICITY OF DEMAND	3.1.3	3.1b, 3.7c
LO 2	CALCULATION AND INTERPRETATION OF ELASTICITY OF DEMAND	3.1.3	3.3, 3.4, 3.5, 3.10, 3.11, 3.12, 3.13, 3.14, 5.7c, 5.12b
LO 3	DETERMINANTS/FACTORS AFFECTING ELASTICITY OF DEMAND	3.1.2	3.1a, 3.2a, 3.7b, 5.7d
LO 4	PRACTICAL SIGNIFICANCE OF ELASTICITY OF DEMAND	3.1.4	3.2b, 3.15
PART B – OTHER VARIANTS OF ELASTICITY OF DEMAND			
LO 5	INCOME ELASTICITY OF DEMAND (YED)	3.1.5	N/A
LO 6	CROSS ELASTICITY OF DEMAND (XED)	3.1.6	3.9, 3.6
PART C – PRICE ELASTICITY OF SUPPLY			
LO 7	DEFINITION AND TYPES OF ELASTICITY OF SUPPLY	3.2.2	N/A
LO 8	DETERMINANTS/FACTORS AFFECTING ELASTICITY OF SUPPLY	3.2.3	3.8

*** October 2016 Edition*

Elasticity of demand is the percentage change in demand due to percentage change in Price of the Good (or in Income of Consumer, or in Price of Other Goods).

PART A – PRICE ELASTICITY OF DEMAND

LO 1: DEFINITION AND TYPES OF ELASTICITY OF DEMAND:

Definition of Price Elasticity of Demand:

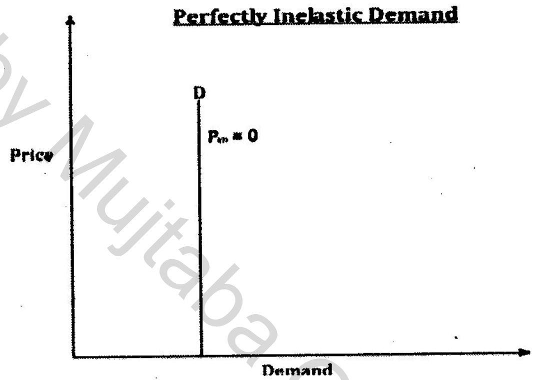
Price Elasticity of Demand is the percentage change in demand due to percentage change in Price of good.

$$P_{ED} = \frac{\%\,\Delta\,Q_d}{\%\,\Delta\,P}$$

Types of Elasticity of Demand:

Perfectly Inelastic Demand:

If demand remains fixed and does not change with change in price, it is called Perfectly inelastic demand i.e. $P_{ED} = 0$

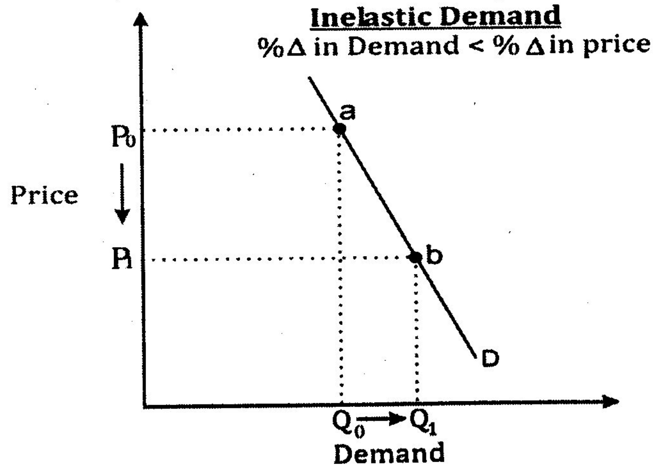


There is zero response to price change.

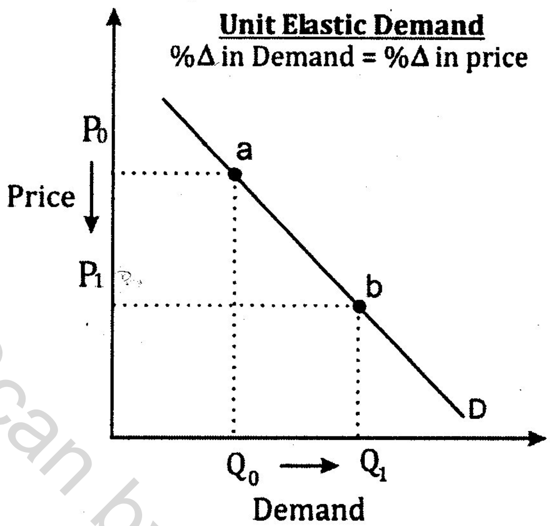
Inelastic or Relatively Inelastic or Highly Inelastic Demand:

If percentage change in demand is less than percentage change in price, it is called Inelastic demand i.e. $P_{ED} < 1$.

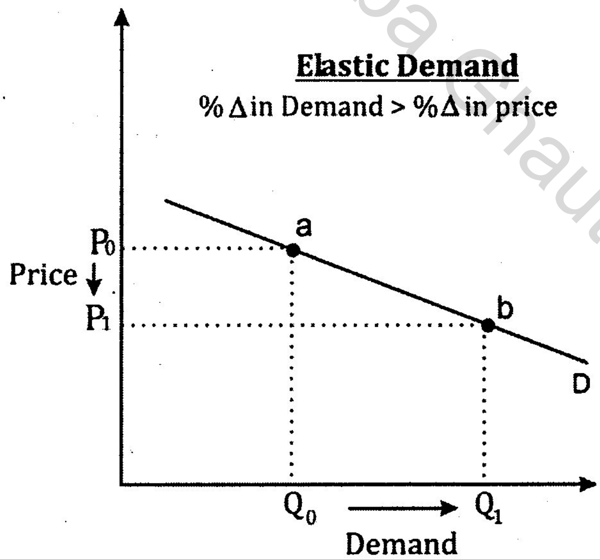
Demand curve will be steeper.



Unit Elastic Demand:
If percentage change in demand is equal to percentage change in price, it is called Unit elastic demand i.e. **P_{ED} = 1.**

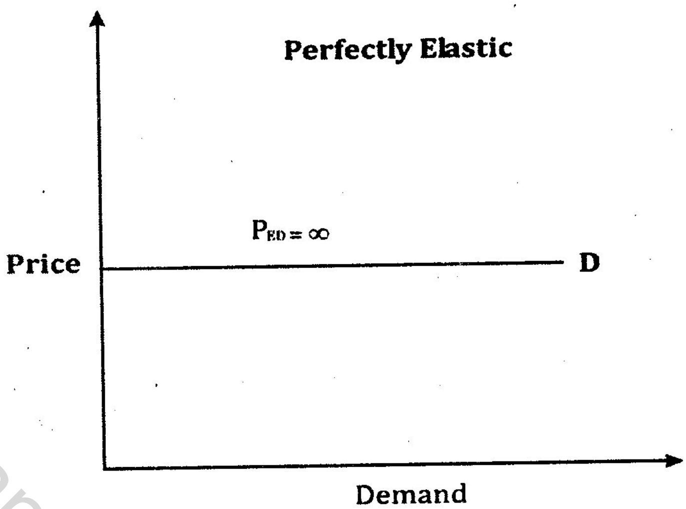


Elastic or Relatively Elastic or Highly Elastic Demand:
If percentage change in demand is greater than percentage change in price, it is called elastic demand i.e. **P_{ED} > 1.**
Demand curve will be flatter.



Perfectly Elastic Demand:

If extremely small change in price causes extremely large change in demand, it is called Perfectly elastic demand i.e. $P_{ED} = \infty$



Study Tip

Beware of difference between Inelastic demand and Perfectly Inelastic demand (and similarly between Elastic demand and Perfectly Elastic demand).

CONCEPT REVIEW QUESTION

Q. 1

Briefly describe when Demand for a product is considered to be:

- Highly Elastic
- Unit Elastic
- Relatively Inelastic

(03)

(ICAP, CAF 02 Level – Autumn 2009)

(ICAP's Official Question Bank for CAF 02 – Q. # 3.1b)

Q. 2

Explain briefly by means of diagrams, the concepts of Unitary Elastic Demand, Relatively Elastic Demand, and Relatively Inelastic Demand. Also, state the impact of a decrease in price on total expenditure in each of the different types of elasticities of demand.

(12)

(ICAP, CAF 02 Level – Autumn 2010)

(ICAP's Official Question Bank for CAF 02 – Q. # 3.5)

Q. 3

Illustrate the relationship between the price and quantity demanded with the help of a diagram when the price elasticity of demand is Elastic, Unitary Elastic and Inelastic.

(Explanation is not required)

(06)

(ICAP, CAF 02 Level – Autumn 2011)

(ICAP's Official Question Bank for CAF 02 – Q. # 3.7c)

LO 2: CALCULATION AND INTERPRETATION OF ELASTICITY OF DEMAND:

There are three methods of calculation of Elasticity of Demand i.e.

1. Percentage or Proportionate Method (using either Arc or Point formula)
2. Total Revenue or Total Expenditure or Total Outlay Method
3. Geometric Method

Percentage Method: (سب سے زیادہ use ہوتا ہے)

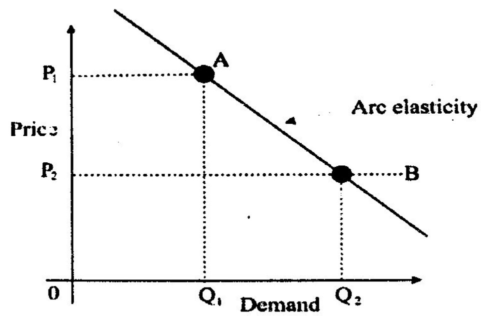
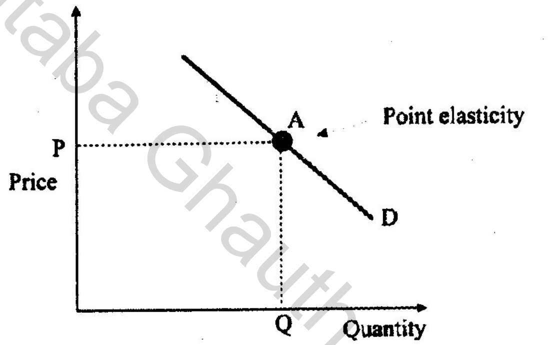
Under Percentage method, following formula is used to calculate elasticity:

$$\left(P_{ED} = \frac{\%\,\Delta\,Q_d}{\%\,\Delta\,P}\right)$$

Note:

1. Note that the numerator and the denominator both contain percentage changes in quantities and prices rather than *absolute* changes in quantities and prices. Similar formula will be used to calculate $\mathbf{X_{ED}}$ and $\mathbf{Y_{ED}}$.

2. Difference between Arc, and Point Methods of Elasticity:

Arc Method of Elasticity	Point Method of Elasticity
Elasticity between two different and distinct points on a demand curve is called Arc Elasticity. It is calculated for large changes in price and demand.	Elasticity on a single point (or very close points) on a demand curve is called Point Elasticity. It is calculated for small changes in price and demand.
If we use Arc formula, percentage is based on average of old and new values.	If we use Point formula, percentage is based on only on old (or original) value.
	

Calculation of Elasticity – An Example of Percentage Method

Compute the price elasticity of a product if a decline in the price of the product from Rs. 12 per unit to Rs. 11 per unit increases its demand from 48,000 units to 60,000 units. **(04 marks)**

(ICAP, CAF 02 Level – Spring 2010)

(ICAP's Official Question Bank for CAF 02 – Q. # 5.12b)

	Price	Demand
	12	48,000
	11	60,000
Change	+1	-12,000

Elasticity of Demand = Percentage change in Demand / Percentage change in Price of good

(i) Elasticity of Demand using Arc Method: *(Preferred Method)*

Percentage change in demand = –12,000/54,000 * 100 (where 54,000 = 48,000+60,000/2) = –22.22%

Percentage change in price = +1/11.5 * 100 (where 11.5 = 12+11/2) = 8.70%

P_{ED} =–22.22% / +8.70% = –2.55

(ii) Elasticity of Demand using Point Method:

Percentage change in demand = -12,000/48,000 * 100 = –25%

Percentage change in price = +1/12*100 = 8.33%

P_{ED} =–25% / +8.33% = –3.00

(Exam Tip: If no method is specified in question, you must use Arc Method)

Interpretation of Number:

1. If number is 0, demand is "perfectly inelastic".
2. If number is between 0 and 1, demand is "inelastic or relatively inelastic"
3. If number is 1, demand is "unitary elastic"
4. If number is more than 1, demand is "elastic or relatively elastic"
5. If number is ∞, demand is "perfectly elastic".

Interpretation of Sign in Price Elasticity of Demand:

- If sign is "–", it is a normal good.
- If sign is "+", it is an giffen good.

Study Tip

In Interpretation of elasticity, sign and number both are to be interpreted separately.

Total Revenue Method:

Alfred Marshal identified that there is a relationship between Elasticity of demand and Total Revenue of a firm.

- If demand is inelastic, price and total revenue move in same direction i.e. increase in price increases total revenue.
- If demand is elastic, price and total revenue move in opposite direction i.e. increase in price decreases total revenue.
- If demand is unit-elastic, change in price does not affect total revenue.

However, this method is unable to give more detail as to whether a certain good is more elastic than other, or by how much.

Calculation of Elasticity – An Example of Total Revenue Method

Identify elasticity of demand using Total Revenue method in following situations.

(a)Price increased from Rs. 10 per unit to Rs. 15 per unit, and demand decreased from 15 units to 6 units.

(b) Price increased from Rs. 10 per unit to Rs. 15 per unit, and demand decreased from 15 units to 10 units.

(c) Price increased from Rs. 10 per unit to Rs. 15 per unit, and demand decreased from 15 units to 14 units.

Solution:

(a)

Price (P)	Demand (Q)	Total Revenue (TR = P * Q)
10	15	150
15	5	75

Increase in price has decreased total revenue, therefore, demand is elastic.

(b)

Price (P)	Demand (Q)	Total Revenue (TR = P * Q)
10	15	150
15	10	150

Increase in price has not changed total revenue, therefore, demand is unit-elastic.

(c)

Price (P)	Demand (Q)	Total Revenue (TR = P * Q)
10	15	150
15	15	225

Increase in price has increased total revenue, therefore, demand is inelastic.

Geometric Method:

Geometric method is used to calculate elasticity of demand on a particular point at demand curve. Following formula is used:

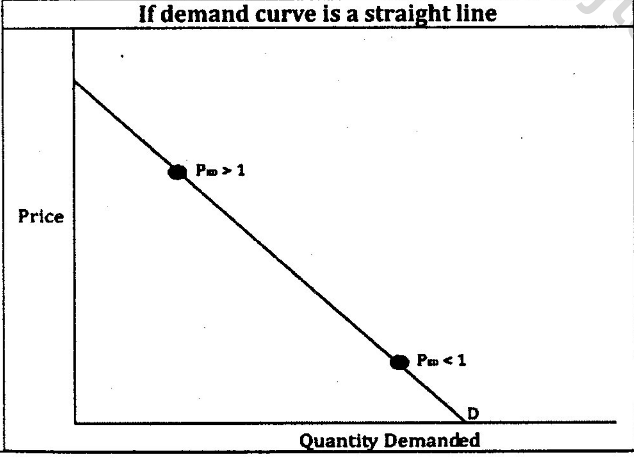
$$P_{ED} = \text{Lower segment of demand curve / Upper segment of demand curve}$$

Notes:

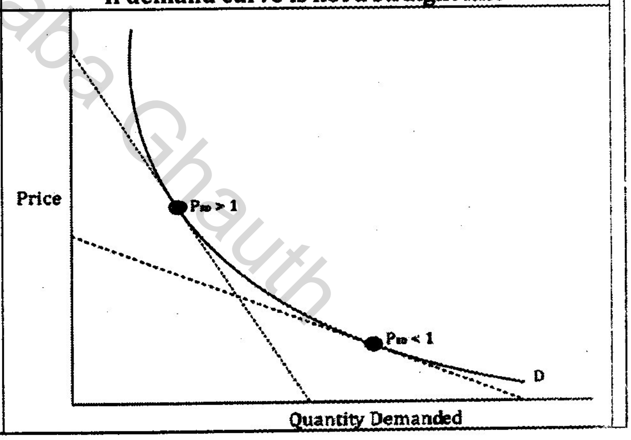
1. The elasticity of demand is *not* constant as you move down a linear demand curve. Demand is elastic at upper-half, unit elastic at mid-point, and inelastic at lower-half.
2. If demand curve is not a straight line, a straight line tangent to the point is drawn to calculate elasticity.

Calculation of Elasticity – An Example of Geometric Method

If demand curve is a straight line



If demand curve is not a straight line



CONCEPT REVIEW QUESTION

Q. 4

Product Zeta currently sells for Rs.10 per unit and the demand at this price is 22,000,000 units. If the price fell to Rs.8 per unit, demand would increase to 27,000,000 units. Compute price elasticity of demand and interpret your result. **(05)**

(ICAP, CAF 02 Level – Spring 2001)

Check Figure: Ed = – 0.92

Q. 5

The price of a component is Rs.1.50 per unit and its annual demand is 900,000 units. An increase in price of 20 Paisa per unit will result in a fall of annual demand for the component by 15,000 units. Calculate the elasticity of demand at the current price of Rs.1.50 units. **(04)**

(ICMA Pakistan – Fall 2012)

Check Figure: Ed = –0.125

Q. 6
Differentiate between 'point elasticity' and 'arc elasticity' by using diagram and formula. **(08)**
(ICMA Pakistan – Summer 2008)

Q. 7
(a) Define Arc elasticity of demand and provide the formula to measure it.
(b) Differentiate between point elasticity and Arc elasticity of demand.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.3)

Q. 8
Write a note on the relationship between Price elasticity of Demand and Revenue.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.10)

Q. 9
Describe briefly the Total Outlay or Total Expenditure Method.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.11)

Q. 10
Write a note on Proportionate or Percentage method giving numerical illustration.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.12)

Q. 11
Explain Geometrical measure of point elasticity of demand.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.13)

LO 3: DETERMINANTS/FACTORS AFFECTING ELASTICITY OF DEMAND:

Availability of substitutes:
If more substitutes are available (e.g. soft-drinks, soaps, tooth-pastes, edible oils), demand will be elastic because consumers can easily switch from one good to another.
If substitutes are not available, demand will be inelastic.

Nature of the commodity:
If product is necessity of life (e.g. wheat, sugar, rice, medicines), demand will be inelastic because people cannot live without them.

If product is luxury/comfort (e.g. Cars, Air-conditions, Jewellery), demand will be elastic.

Consumer loyalty:
If there is strong consumer loyalty (e.g. in brand goods like i-phone), demand will inelastic because loyal customers don't move to other products.

Time Period:
In short-run, demand is inelastic, because people cannot find substitutes or cannot change their habits quickly.

In long-run, demand is elastic.

Portion of income used on item:
If significant portion of consumer's income is spent on a good (e.g. car), demand will be elastic because consumers will be carefule in purchasing the good.

If small portion of consumer's income is spent on a good (e.g. salt, matchbox), demand will be inelastic.

Degree of addiction:
If there is an addiction of the good (e.g. cigarette, drugs), demand will be inelastic.

Income level of consumers:
For rich, elasticity of demand for commodities is usually inelastic because increase in price does not affect their overall expenditure.

For poor, elasticity of demand for commodities is usually elastic.

Goods having several uses:
Some goods have several uses e.g. electricity may be used as necessity as well as a luxury. If use is more important, demand will be inelastic.

Durable Goods and Perishable Goods:
Generally demand for durable goods (e.g. car, freezer, air conditioner) is elastic because it can be postponed. However, demand for perishable goods (e.g. vegetables, fruits) is inelastic because it cannot be postponed.

CONCEPT REVIEW QUESTION

Q. 12
What is meant by Elasticity of Demand? List and explain briefly the factors which determine the Elasticity of Demand of a product. **(07)**
(ICAP, CAF 02 Level – Autumn 2009)
(ICAP's Official Question Bank for CAF 02 – Q. # 3.1a)

Q. 13
Compute the price elasticity of a product if an increase in the price of the product from Rs. 10 per unit to Rs. 11 per unit causes a decrease in its demand from 2.5 million units to 1.9 million units. **(03)**
(ICAP, CAF 02 Level – Autumn 2016)
Check Figure: $E_d = -2.86$

Q. 14
Define Price Elasticity of Demand and briefly explain three determinants of Price Elasticity of Demand. **(06)**
(PIPFA - Winter 2017)

Q. 15
Explain the concepts of price elasticity of demand and income elasticity of demand and the factors which determine their values for different goods.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.2a)

Q. 16
Explain briefly the factors which determine the Price Elasticity of Demand. **(06)**
(ICAP, CAF 02 Level – Autumn 2011)
(ICAP's Official Question Bank for CAF 02 – Q. # 3.7b)

LO 4: PRACTICAL SIGNIFICANCE OF ELASTICITY OF DEMAND:

For Firm:

In pricing decision:
Firms use P_{ED} in determining price of its products. If demand is inelastic, firm increases price to increase total revenue. If demand is elastic, firm decreases price to increase total revenue.

In Price Discrimination by firms:
If different consumer-markets have different elasticity, then firm can charge higher price in market with inelastic demand.

In Shifting Tax Burden to Consumers:
Producers can shift the burden of tax to consumers, if demand is inelastic. If demand is elastic, then more burden of tax will be on producers.

For Government:

In Tax Decision:
To increase tax collection, government shall impose higher taxes on goods whose demand is inelastic. This will increase government revenue without losing business e.g. on cigarette.

To Increase Export Receipts:
If demand of exported goods is inelastic, an increase in price will increase exports receipts of country.

CONCEPT REVIEW QUESTION

Q. 17
Explain how knowledge of price elasticity of demand would be relevant to:
(i) a firm seeking to practise price discrimination;
(ii) a government seeking to introduce taxes on goods and services.
(ACCA UK- June 1999)

Q. 18
Explain the usefulness to a business of information on price and income elasticity of demand for its product.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.2b)

Q. 19
Elaborate the usefulness of the concept of Price elasticity of demand.
(ICAP's Official Question Bank for CAF 02 – Q. # 3.15)

PART B – OTHER VARIANTS OF ELASTICITY OF DEMAND

LO 5: INCOME ELASTICITY OF DEMAND (Y_{ED}):

Definition:
Income Elasticity of Demand is the percentage change in demand of a product due to percentage change in income of consumer. i.e.

$$Y_{ED} = \frac{\% \Delta Q_d}{\% \Delta Y}$$

Interpretation of Sign in Income Elasticity of Demand:

- If sign is "–", it is inferior good.
- If sign is "+", it is a normal good. (If number is between 0 to 1, it means good is necessity. If number is greater than 1, it means good is luxury.)

Importance of Income Elasticity of Demand (Y_{ED}):

Importance for Sales and Production planning by Firms:
Firms forecast impact of change in income on demand for products. As economy grows and income rises, firms focus on products that have high Y_{ED}. Consequently, firms switch their resources from goods with low Y_{ED} to goods with high Y_{ED}.

CONCEPT REVIEW QUESTION

Q. 20
Describe the concept of Income Elasticity of Demand. What do the positive and the negative income elasticity of demand indicate? **(04)**
(PIPFA – Summer 2017)

LO 6: CROSS ELASTICITY OF DEMAND (X_{ED}):

Definition:

Cross Elasticity of Demand is the percentage change in demand of a product due to percentage change in price of other good i.e.

$$X_{ED} = \frac{\%\,\Delta\, Q_A}{\%\,\Delta\, P_B}$$

Interpretation of Sign in Cross Elasticity of Demand:

- If sign is "–",it is complementary good.
- If sign is "+", it is substitute good. (if number is 0, it means goods are unrelated/ independent)
- If X_{ED} is "Zero", goods are unrelated (or independent).

CONCEPT REVIEW QUESTION

Q. 21
Define Cross Elasticity of Demand. **(02)**
(PIPFA – Summer 2016)

Q. 22
Briefly explain the following:
(i) Income elasticity of demand
(ii) Cross price elasticity of demand **(10)**
(ICAP, CAF 02 Level – Spring 2013)

Q. 23
Write a comprehensive note on Cross elasticity of Demand
(ICAP's Official Question Bank for CAF 02 – Q. # 3.9)

Q. 24
Briefly describe what characteristics of a commodity are indicated by a negative or a positive sign of 'Income elasticity of demand' and 'Cross price elasticity of demand' of that commodity.
(ICAP, CAF 02 Level – Spring 2018)

Q. 25
(i) The quantity demanded for Alpha decreases from 300 units to 250 units, when the price of Beta increases from Rs. 50 to Rs. 55.
(ii) The quantity demanded for Gamma increases from 400 units to 450 units, when the price of Delta increases from Rs. 100 to Rs. 125.
For each of the above cases, you are required to:
- determine the Cross Price Elasticity of Demand (XED) and
- on the basis of XED determined above, comment on whether the goods are substitutes or complements. **(08 marks)**

(ICAP, CAF 02 Level – Autumn 2015)
Check Figure: X_{ED} (Alpha & Beta) = –1.91, X_{ED} (Gamma & Delta) = +0.53

PART C – PRICE ELASTICITY OF SUPPLY

LO 7: DEFINITION AND TYPES OF ELASTICITY OF SUPPLY:

Definition of Price Elasticity of Supply:

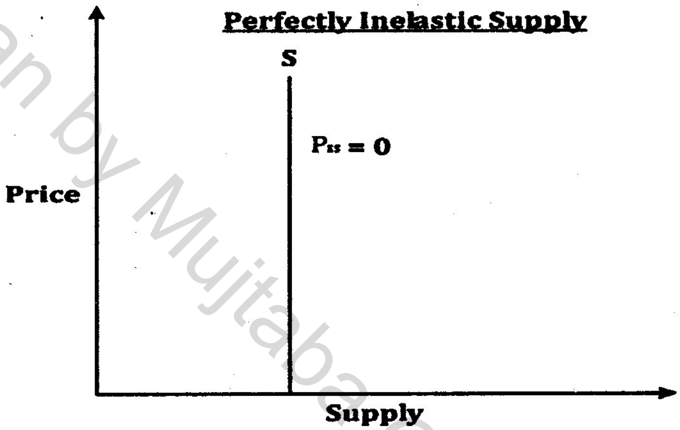
Price Elasticity of Supply is the percentage change in supply due to percentage change in Price of good.

$$P_{ES} = \frac{\% \Delta Q_S}{\% \Delta P}$$

Types of Elasticity of Supply:

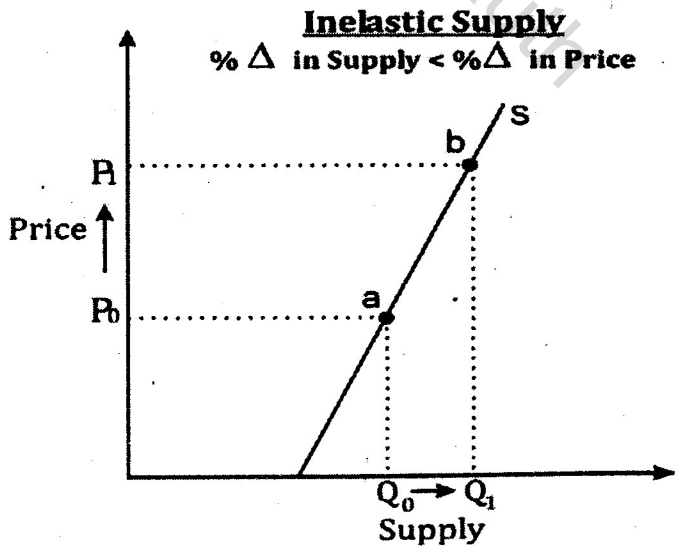
Perfectly Inelastic:

If supply remains fixed and does not change with change in price, it is called Perfectly inelastic supply i.e. $P_{ES} = 0$

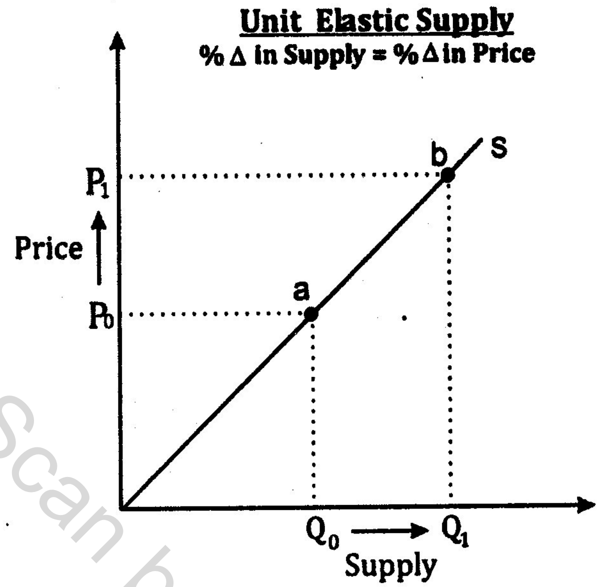


Inelastic or Relatively Inelastic:

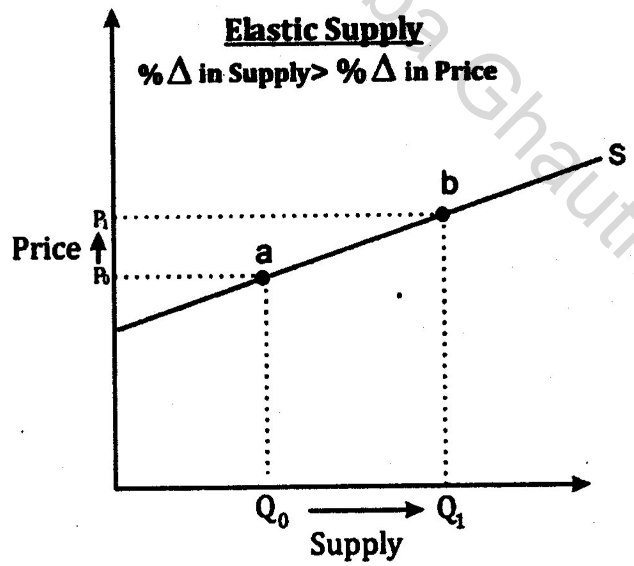
If percentage change in supply is less than percentage change in price, it is called Inelastic supply i.e. $P_{ES} < 1$.



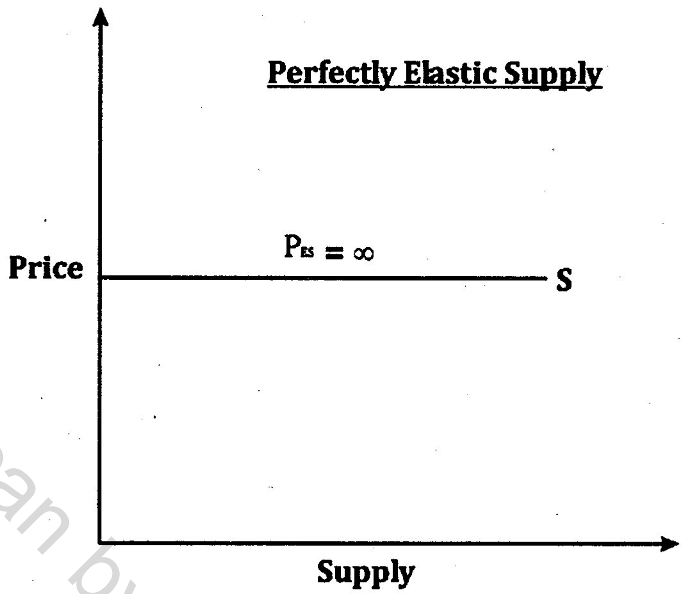
Unit Elastic:
If percentage change in supply is equal to percentage change in price, it is called Unit elastic supply i.e. $P_{ES} = 1$.



Elastic or Relatively Elastic:
If percentage change in supply is greater than percentage change in price, it is called elastic supply i.e. $P_{ES} > 1$.



Perfectly Elastic:
If extremely small change in price causes extremely large change in supply, it is called Perfectly elastic supply i.e. $P_{ES} = \infty$



CONCEPT REVIEW QUESTION

Q. 26
State the meaning of 'price elasticity of supply'. Briefly discuss different types of elasticity of supply. **(05)**
(ICAP, CAF 02 Level – Autumn 2014)

Q. 27
The price elasticity of supply indicates the responsiveness of supply to a change in price. How price elasticity of supply can be measured. Draw graphs showing (i) perfectly inelastic supply, (ii) unit elastic supply and (iii) perfectly elastic supply. Identify the factors affecting elasticity of supply. **(07)**
(ICMA Pakistan – Summer 2014)

LO 8: DETERMINANTS/FACTORS AFFECTING ELASTICITY OF SUPPLY:

Time period to respond:
In very short-run (or momentary or market period), supply is perfectly inelastic because firm cannot immediately increase its supply.

In short-run, supply is inelastic because firm only slightly increase its supply by over-utilizing its existing resources.

In long-run, supply is elastic because firm can increase its production and capacity in the long run by installing new machinery or new factory.

Nature of Product:
If product is perishable, its supply is inelastic because it cannot be stored.

If product is durable, its supply is elastic because it can be stored and supply can be postposed.

Availability/Mobility of factors of production:
If factors of production of a good can be switched to other products, its supply will be elastic, because supply can be increased or decreased by moving resources easily.

If factors of productions cannot be switched to other products, its supply will be inelastic.

Spare Capacity:
If there is spare capacity in the firm, supply of the product is elastic because supply can be increased.

If firm is operating at full capacity, supply will be inelastic.

Production Time:
If production of a product requires long time (e.g. agricultural products), supply will be inelastic.

If production of a product requires short time (e.g. industrial products), supply will be elastic.

Barriers to Entry:
If there are no barriers to entry in market, supply will be elastic because it is easy for firms to enter or exit market.

If there are barriers to entry in market, supply will be inelastic because it is not easy for firms to enter or exit the market.

CONCEPT REVIEW QUESTION

Q. 28
Define the concept of 'Price elasticity of supply' and how it may be calculated. Identify the factors which would increase the price elasticity of supply. **(05)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 29
Describe briefly the factors influencing price elasticity of supply

(ICAP's Official Question Bank for CAF 02 – Q. # 3.8)

CHAPTER FOUR
CONSUMER EQUILIBRIUM

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Questi Bank Referenc
PART A – CONSUMER EQUILIBRIUM THROUGH UTILITY APPROACH			
LO 1	UTILITY AND ITS PROPERTIES	4.1.3, 4.1.4, 4.1.5	N/A
LO 2	LAW OF DIMINISHING MARGINAL UTILITY	4.1.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5	4.7 a&b
LO 3	LAW OF EQUI-MARGINAL UTILITY	4.3.7	N/A
PART B – CONSUMER EQUILIBRIUM THROUGH INDIFFERENCE CURVE APPROACH			
LO 4	INDIFFERENCE CURVE AND ITS PROPERTIES	4.3.3, 4.3.4	4.2, 4.9
LO 5	MARGINAL RATE OF SUBSTITUTION (MRS)	4.3.5	4.10
LO 6	BUDGET LINE / PRICE LINE / BUDGET CONSTRAINTS	4.3.6	N/A
LO 7	CONSUMER EQUILIBRIUM THROUGH INDIFFERENCE CURVE APPROACH	4.3.7	4.1, 4.7 c&d, 4
PART C – CHANGE IN CONSUMER EQUILIBRIUM			
LO 8	CHANGE IN CONSUMER EQUILIBRIUM – INCOME EFFECT	4.4.4	4.5, 4.3
LO 9	CHANGE IN CONSUMER EQUILIBRIUM – PRICE EFFECT	4.4.2, 4.4.5	4.4, 4.3
LO 10	CHANGE IN CONSUMER EQUILIBRIUM – EXTENDED ANALYSIS OF PRICE EFFECT	4.4.3, 4.4.6	4.6, 4.3

***** October 2016 Edition***

A consumer is in equilibrium when he obtains maximum satisfaction from purchase of multiple goods at prevailing market prices, with all of his limited income.

There are two approaches to find out consumer equilibrium:

1. Utility Approach
2. Indifference Curve Approach

CONCEPT REVIEW QUESTION

Q. 1
What do you understand by 'Consumer equilibrium'? **(02)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 2
When is a consumer in an Equilibrium position? **(02)**
(ICAP, CAF 02 Level – Spring 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 4.7b)

PART A – CONSUMER EQUILIBRIUM THROUGH UTILITY APPROACH

LO 1: UTILITY AND ITS PROPERTIES:

Utility:
Utility means the amount of satisfaction/pleasure/benefit which a person gets from consumption of a good or service.

Cardinal Measurement of Utility:
Cardinal measurement means Utility can be measured quantitatively (like any other physical commodity) by assigning a **numeric value** to it e.g. 10, 20.

Benefit of Cardinal Measurement: It becomes easy to compare utility between different goods.
Problem of Cardinal Measurement: It is abstract (or arbitrary) concept to assign value to utility.

Ordinal Measurement of Utility:
Ordinal measurement means utility cannot be measured using numeric values. Consumer can only give **ranking/preference** to different commodities on the basis of satisfaction received from each commodity e.g. 1st, 2nd, 3rd.

Problem of Ordinal Measurement: It becomes difficult to compare utility between different goods.

CONCEPT REVIEW QUESTION

Q. 3
Write short notes on Cardinal and ordinal approaches of utility measurement. **(06)**
(ICMA Pakistan – Fall 2007)

LO 2: LAW OF DIMINISHING MARGINAL UTILITY:

Law of Diminishing Marginal Utility:

Marginal Utility (i.e. additional utility from consumption of an additional unit) of a good decreases with every successive unit consumed, other things remaining the same.

Assumptions of the Law of Diminishing Marginal Utility:

1. Cardinal measurement of utility is possible.
2. Consumer is rational and wants maximum satisfaction.
3. Consumer has perfect knowledge of utilities derived from goods.
4. Consumer has fixed limited income.
5. Consumer has single want.
6. All units should be homogenous.
7. Size of all units should be standardized.
8. Consumption must be continuous without time-breaks.
9. Taste/Fashion should remain same during consumption.

Table/Schedule:

Units	Total Utility	Marginal Utility
1st	4	4
2nd	7	3
3rd	9	2
4th	10	1
5th	10	0
6th	9	-1

Total Utility (T.U.):

Total utility (TU) is the aggregate utility derived by a consumer after consuming all the available units of a commodity.

Marginal Utility (M.U.):

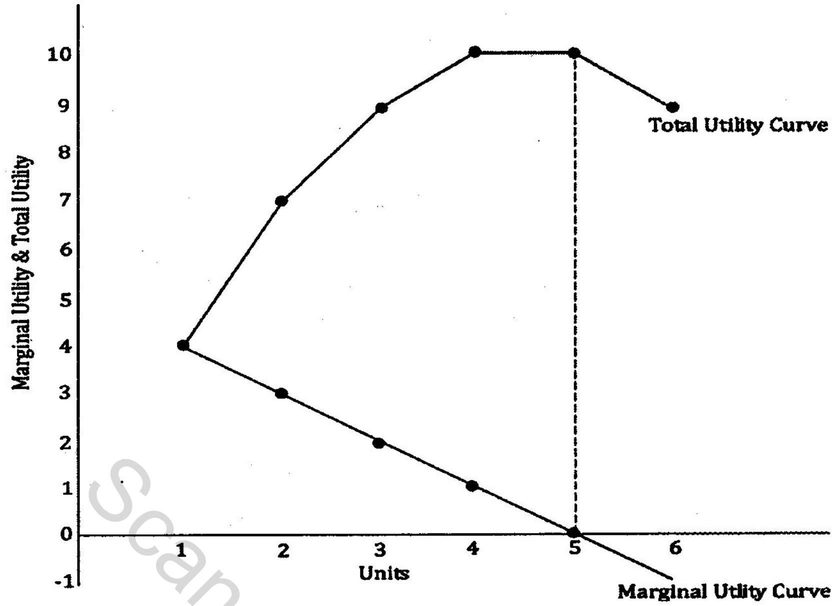
Marginal Utility is the additional utility (i.e. satisfaction) from consumption of an additional unit of a commodity i.e.

Marginal Utility = Change in Total Utility / Change in Number of Units

Exam Tip

In exam, if you are given TU, you can calculate MU. Similarly, if you are given MU, you can calculate TU.

Diagram:



Explanation:

1. In this diagram, Units of good are shown on X-axis, and Marginal Utility and Total Utility are shown on Y-axis.
2. *M.U. curve* moves downward because marginal utility decreases with every successive unit. At unit 5, marginal utility becomes zero and thereafter it becomes negative.
3. *T.U. curve* moves upward at start. At unit 5, total utility is at maximum level. Thereafter it moves downward.
4. Relationship between M.U. and T.U. can also be explained from the diagram i.e.
    a. when M.U. is positive, T.U. increases.
    b. when M.U. is zero, T.U. is maximum.
    c. when M.U. is negative, T.U. decreases.

A rational consumer will stop where MU is zero.

Exceptions of the Law of Diminishing Marginal Utility:

The law does not hold true in following cases because marginal utility of these goods increases with increased acquisition:

1. Wealth
2. Knowledge
3. Hobbies (e.g. collecting antiques/rare items etc.)

Practical Importance of the Law of Diminishing Marginal Utility:

1. **For consumer in determining consumption:**
   By consuming one additional item of a product the utility decreases. Due to this behavior the buyer cuts the expenditure on that specific commodity accordingly.

2. **For producer in determination of price:**
   The law also helps in the price determination, because customers are willing to pay high prices for goods which have high utility.

3. **For government in determination of tax policy:**
   This law helps government in making tax policy. Higher tax is imposed on rich people and lower on poor, which in turn helps in reducing unequal distribution of wealth.

4. **Basis of other laws:**
   Law of diminishing marginal utility forms the basis of many other laws e.g. law of demand.

CONCEPT REVIEW QUESTION

Q. 4
Describe the Law of 'Diminishing marginal utility'. Support your answer with the help of a schedule and a diagram. **(07)**
(ICAP, CAF 02 Level – Spring 2017)

Q. 5
Describe the Law of Diminishing Marginal Utility. **(03)**
(ICAP, CAF 02 Level – Spring 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 4.7a)

Q. 6
Define Law of Diminishing Marginal Utility and list its exceptions. **(04)**
(PIPFA-Summer 2018)

Q. 7
Describe the limitations of the Law of Diminishing Marginal Utility. **(05)**
(ICAP, CAF 02 Level – Spring 2012)

Q. 8
Define the term utility. What is the difference between total utility and marginal utility? Explain the law of diminishing marginal utility giving a numeric example. **(10)**
(ICMA Pakistan – Summer 2011)

Q. 9
Marginal utility means the additional utility a consumer gets from consumption of an additional unit of a commodity. How does the concept apply to;
(i) Normal goods
(ii) Money **(04)**
(ICAP, CAF 02 Level – Autumn 2007)

LO 3: LAW OF EQUI-MARGINAL UTILITY (OR CONSUMER EQUILIBRIUM UNDER UTILITY APPROACH):

Law of Equi-Marginal Utility:

A consumer gets maximum utility when he spends all of his income on multiple commodities in such a way that the marginal utility of last rupee spent on each commodity is equal i.e.

$$MU_A/P_A = MU_B/P_B = \ldots\ldots\ldots\ldots$$

Assumptions:

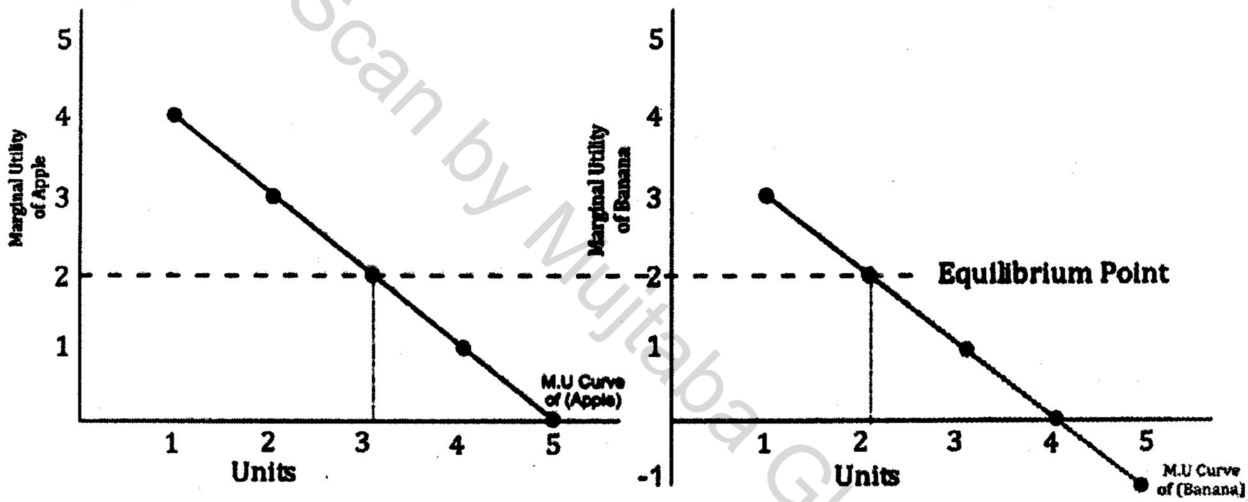
1. Law of diminishing marginal utility also operates.
2. Cardinal measurement of utility is possible.
3. Consumer is rational and wants maximum satisfaction.
4. Consumer has perfect knowledge of utilities derived from goods.
5. Consumer has fixed limited income.
6. Prices of goods are unchanged.
7. Marginal utility of money is constant.
8. Consumer has many wants.
9. Wants and Goods can be substituted and are divisible.

Table:

Suppose consumer has five Rupees that he wants to spend on apples and bananas. For simplicity, assume price of both goods is Re. 1.

Units	MU of Apples	MU of Bananas
1	4	3
2	3	2
3	2	1
4	1	0
5	0	-1

Graph:



Explanation:

1. The above diagrams show marginal utility (at various levels of consumption) derived by consumer by the use of the two commodities. When consumer consumes 3 units of Apple and 2 units of Banana, the marginal utility derived from the consumption of both the items is equal to 2. Therefore, consumer gets the maximum utility at this level, and not at any other level.

Limitations of Law of Equi-marginal utility:

Indivisibility of Goods:

Sometimes goods cannot be sub-divided e.g. cars cannot be divided into small parts like apples. Therefore, optimum point of equal marginal utility cannot be achieved.

Consumer Ignorance:

Customer may not have perfect knowledge of availability of all goods and their utilities.

Consumers do not make conscious calculation:

Mostly consumers don't think about utility in terms of numeric values.

Custom and Fashion:

Sometimes consumers buy on the basis of habits, customs and fashions, and NOT on the basis of utility.

Other limitations of the law:
Other assumptions of the law may also not be true in practice e.g.

- Utility cannot be cardinally measured.
- Marginal utility of durable goods are difficult to compare with marginal utility of perishable goods (due to difference in lives of both goods).

Practical Importance/Application of the Law of Equi-Marginal Utility:
This law provides solution to basic Economic Problem i.e. how to manage scarce (limited) resource against unlimited wants e.g.:

For consumers to achieve optimum allocation of income on different goods:
It guides consumers that, to get maximum satisfaction, they must buy goods of greater marginal utility and must quit goods of lower marginal utility.

For producers to achieve optimum allocation of resources on production:
It guides producers to use those factors of production which have high marginal productivity and should quit factors of production with lower marginal productivity.

CONCEPT REVIEW QUESTION

Q. 10
Define the law of 'Equi-marginal utility' and list the assumptions underlying the law. Also describe any two limitations of the law of equi-marginal utility. **(07)**
(ICAP, CAF 02 Level - Spring 2018)

Q. 11
Explain the limitations of the Law of Equi Marginal Utility. **(06)**
(PIPFA - Summer 2017)

Q. 12
Discuss practical importance of law of equi-marginal utility. **(07)**
(ICAP, CAF 02 Level - Spring 2009)

Q. 13
Mr. Khan wants to spend Rs. 100 on two commodities, Rice and Sugar. Following table shows the marginal utility (MU) derived from both of these commodities:

Units of money (Rs.)	MU of Rice	MU of Sugar
20	10	12
40	8	10
60	6	8
80	4	6
100	2	3

Explain briefly Mr. Khan's equilibrium position with the help of a diagram using the principle of Equi-Marginal Utility. **(06)**
(ICAP, CAF 02 Level - Spring 2012)

PART B – CONSUMER EQUILIBRIUM THROUGH INDIFFERENCE CURVE APPROACH

LO 4: INDIFFERENCE CURVE AND ITS PROPERTIES:

Indifference Curve:

Definition:

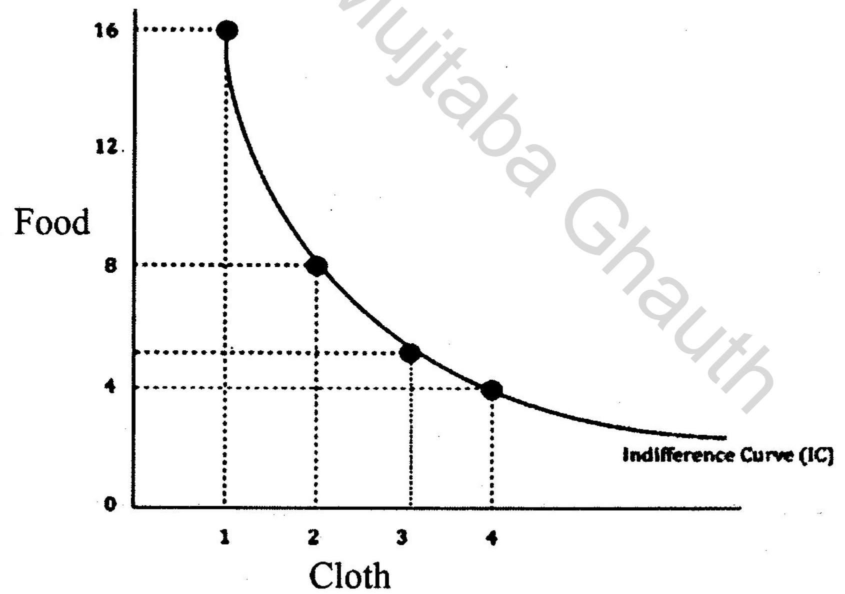
Indifference Curve represents various combinations of two goods, where each combination provides same level of utility/satisfaction i.e. consumer is indifferent among each combination.

Table:

Suppose that a consumer has following combinations of two goods (Food and Cloth) and each combination gives consumer same satisfaction:

Combination	Units of Cloth	Units of Food	Level of Satisfaction
A	1	16	Same
B	2	8	Same
C	3	5	Same
D	4	4	Same

Diagram:



Properties of Indifference Curve:

1. Indifference Curve never touches X-axis or Y-axis:

Because Indifference Curve represents *combination* of two goods and if it touches any axis, quantity of one good will become zero.

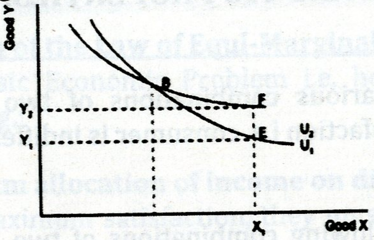
2. Higher Indifference Curve represents higher satisfaction:

Higher indifference curve (farther from the origin) gives higher satisfaction because they contain more of both goods, which means more satisfaction.

3. Two Indifference Curves cannot intersect each other:

Because at point of intersection, both curves will represent same satisfaction but at any other point one curve will represent higher and other will represent lower satisfaction, which is illogical because satisfaction remains same throughout the indifference curve.

Therefore, following curves are illogical:



4. Indifference curves slope downwards (or negative):

If a consumer consumes more of one good, he must consume less of the other good to keep satisfaction same.

5. Indifference curves are usually convex to the origin:

Because Marginal Rate of Substitution diminishes as we move down the curve, because every next unit of Commodity 'X' is giving less and less satisfaction, therefore less and less units of commodity 'Y' will be sacrificed.

CONCEPT REVIEW QUESTION

Q. 14
Define Indifference Curve and explain why does it slope downwards? **(04)**
(PIPFA – Summer 2017)

Q. 15
What is an indifference curve? Briefly explain three main characteristics of indifference curves. **(06)**
(ICAP, CAF 02 Level - Spring 2019)

Q. 16
(a) Define Indifference Curve.
(b) Prove that indifference curves are always convex to origin.
(c) Prove that indifference curves do not intersect each other.
(ICAP's Official Question Bank for CAF 02 – Q. # 4.9)

Q. 17
What is an indifference curve? List the properties of an indifference curve. **(03)**
(ICAP, CAF 02 Level – Autumn 2013)

LO 5: MARGINAL RATE OF SUBSTITUTION (MRS):

Definition:

Marginal rate of substitution (also called slope of the indifference curve) is the rate at which a consumer is willing to trade or substitute one good for other to maintain the same level of satisfaction. i.e.

MRS (also the Slope of IC) = change in Units of B/change in Units of A

Table:

Combination	Units of Food	Units of Cloth	Level of Satisfaction	MRS
A	1	16	Same	-
B	2	8	Same	8 : 1
C	3	5	Same	3 : 1
D	4	4	Same	1 : 1

CONCEPT REVIEW QUESTION

Q. 18
(a) Explain the term marginal rate of substitution with the help of an example. **(04)**
(b) Why does the marginal rate of substitution diminish? **(03)**
(ICAP, CAF 02 Level – Autumn 2008)

Q. 19
Write a detailed note on Marginal Rate of Substitution.
(ICAP's Official Question Bank for CAF 02 – Q. # 4.10)

LO 6: BUDGET LINE / PRICE LINE / BUDGET CONSTRAINTS:

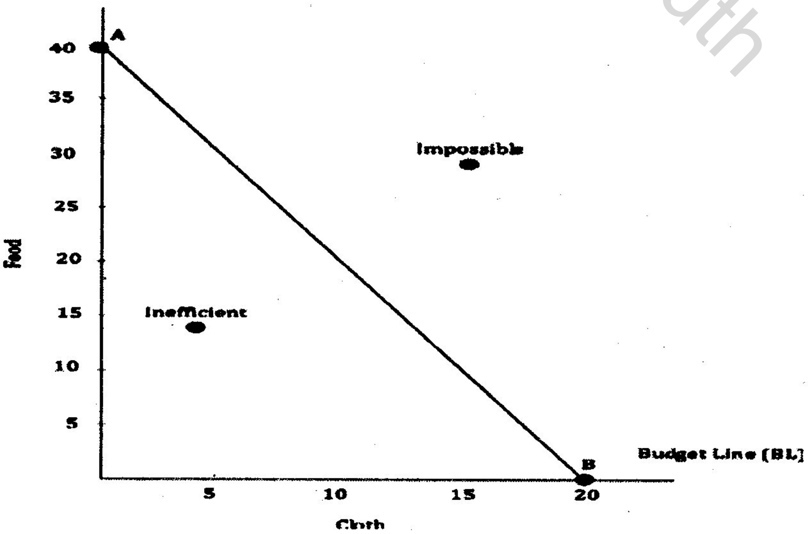
Budget Line:

Definition:
A budget line represents various combinations of two goods that a consumer can buy with his fixed income, at given market prices.

Example:
Suppose, Sameer has 40 rupees to spend on units of Food and Cloth. He can spend his total income on Food (@Rs. 2/unit), and on Cloth (@ Re 1/unit). Possible combinations are as follows:

Option	Cloth (units)	Food (units)
A	20	0
B	0	40

Graph and Explanation:



All points (i.e. combinations) on the curve show consumer is buying equal to total budget. Points below budget line show expenditure is less than total budget (inefficient). Points above budget line show that expenditure is more than total budget (impossible).

Budget line will always be a straight line.

Change in Budget Line:

Budget Line changes when there is change in:

1. Income of Consumer or
2. Price of Goods

Study Tips – Effect of Change in Income and Price on Budget Line

Effect of Change in Income of Consumer:

- If income of a consumer increases, budget line will shift parallel rightward (from both corners).
- If income of a consumer decreases, budget curve will shift parallel leftward (from both corners).

Effect of Change in Price of Goods:

- If price of a good increases, budget line will come closer to the origin (from relevant one corner only).
- If price of a good decreases, budget line will go away from origin (from relevant one corner only).

CONCEPT REVIEW QUESTION

Q. 20

What is meant by Budget Line? **(03)**

(ICAP, CAF 02 Level – Spring 1997)

Q. 21

Mr. Javed has a budget of Rs. 100. He wants to purchase two goods X and Y. If price of X is Rs. 20 per unit and price of Y is Rs. 10 per unit; draw a Budget Line.

What would happen to this budget line if income of Mr. Javed increases from Rs. 100 to Rs. 200? **(04)**

(PIPFA – Summer 2016)

LO 7: CONSUMER EQUILIBRIUM THROUGH INDIFFERENCE CURVE APPROACH:

Consumer Equilibrium: *(Through Indifference Curve Approach)*

A consumer is in equilibrium if he selects the highest possible indifference curve within range of his budget Line. It is that point where following two conditions are met:

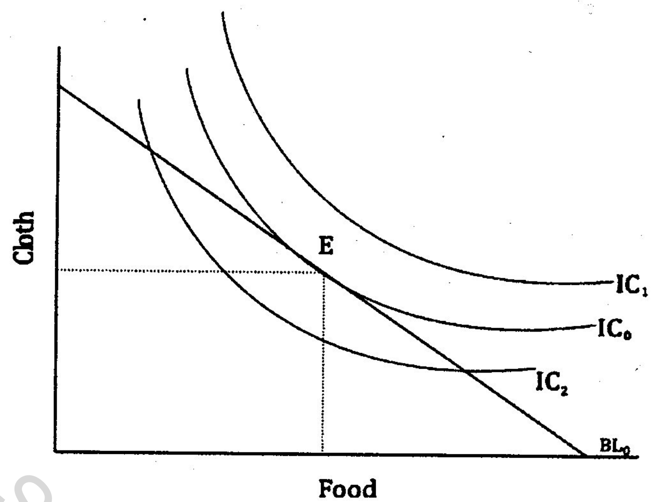
1. Budget Line should be tangent to Indifference curve.
2. Marginal Rate of Substitution (i.e. slope of indifference curve) is equal to relative prices of goods (i.e. slope of budget line). Symbolically, MRS = P_y/P_x

Assumptions of Indifference Curve:

1. Satisfaction is measured using Ordinal measurement.
2. Whole income of consumer is to be spent on two goods only.
3. Consumer is rational and wants to maximize its satisfaction.
4. Goods are substitutable and divisible.
5. Preferences are not self-contradictory.
6. Income of the consumer, and price of the good is fixed.

Diagram and Explanation:

Diagram:



Explanation:

1. Units of Good X and Good Y are shown on X-axis and Y-axis respectively.
2. Line BL represents Budget Line of the consumer.
3. IC_0, IC_1 and IC_2 are three indifference curves representing different levels of satisfaction.
4. IC_1 represents highest level of satisfaction but it is beyond budget line, hence it is **impossible** to attain.
5. IC_2 is within budget but is represents lowest level of satisfaction, hence it is **inefficient**.
6. IC_0 represents highest possible indifference curve on which budget line is tangent hence tangent point "E" on this curve is the Equilibrium Point.

Study Tip

An indifference curve cannot intersect any other indifference curve, but an indifference curve can intersect any other budget line.

CONCEPT REVIEW QUESTION

Q. 22

What is indifference curve? Briefly explain assumptions of indifference curve. (06)

(PIPFA-Summer 2018)

Q. 23

Demonstrate your familiarity with the indifference curve approach to the problem of consumer's equilibrium. Support your description by drawing suitable diagram. (12)

(ICAP, CAF 02 Level – Spring 2009)

(ICAP's Official Question Bank for CAF 02 – Q. # 4.1)

Q. 24

(a) Narrate the basic assumptions applicable to the Indifference Curve Approach. (03)

(b) Explain consumer's equilibrium with the help of a diagram using indifference curves. (09)

(ICAP, CAF 02 Level – Spring 2011)

(ICAP's Official Question Bank for CAF 02 – Q. # 4.8)

Q. 25

Explain the concept of consumer equilibrium with the help of indifference curve analysis. (08)

(ICAP, CAF 02 Level – Autumn 2017)

Q. 26

(a) Narrate the assumptions applicable to the indifference curve approach. (03)

(b) With the help of Indifference Curve show how consumers maximize their levels of satisfaction. Support your decision by drawing a suitable diagram. (07)

(ICAP, CAF 02 Level – Spring 2010)

(ICAP's Official Question Bank for CAF 02 – Q. # 4.7c&d)

PART C – CHANGE IN CONSUMER EQUILIBRIUM

LO 8: CHANGE IN CONSUMER EQUILIBRIUM – INCOME EFFECT:

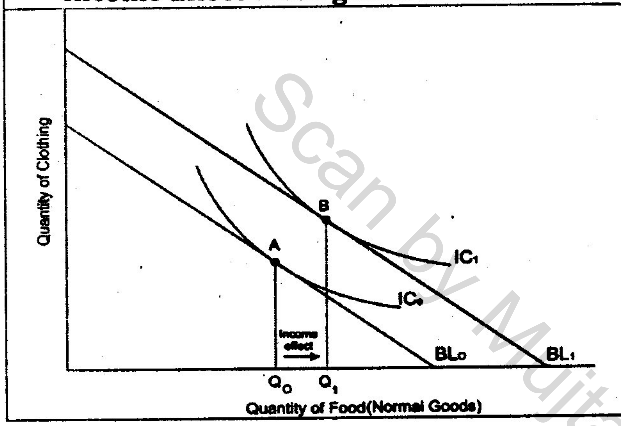
Income Effect (I.E.):

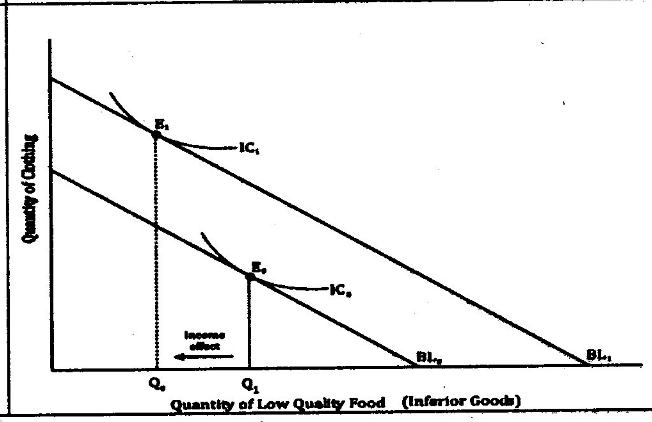
Income Effect is the change in consumer equilibrium (i.e. change in purchases of goods) due to change in income of consumer, keeping prices of goods constant.

Hints for showing Income Effect in diagrams

Change	Type of Good	Effect on equilibrium quantity
Increase in Income of Consumer	Normal	Increase
	Inferior	Decrease

Income Effect when goods are normal	Income Effect when one good is inferior





Explanation:

1. Units of Good X and Good Y are shown on X-axis and Y-axis respectively.
2. Line BL_0 represents Original Budget Line of the consumer, which is tangent on Indifference curve IC_0 making E_0 as original Equilibrium Point.
3. Now, suppose income of consumer increases, which results in new Budget Line BL_1 and new Equilibrium point E_1.
4. Now the difference between quantity of X at E_0 and E_1 is "Income Effect".

Study Tip

1. If income is changed and we join old and new equilibrium points with a straight line, this line is called Income Consumption Curve (ICC).
2. Income effect of Increase in income is shown above; however, you should also be able to show income effect of decrease in income.

CONCEPT REVIEW QUESTION

Q. 27

Write short note on the Income Effect. **(2.5)**

(ICAP, CAF 02 Level – Autumn 1994)

Q. 28

In context of Consumer's Equilibrium, explain the effect of a change in income when the goods being used are 'inferior'. **(03)**

(ICAP, CAF 02 Level – Autumn 2001)

Q. 29

Briefly explain the effect of following on consumer equilibrium (using Indifference Curve analysis):

(i) If income increases and X & Y are Normal goods.

(ii) If income increases and X is an inferior good. **(08)**
(PIPFA – Winter 2016)

Q. 30
Define Income effect using diagrams for.
- Normal goods
- When product X, is inferior

(ICAP's Official Question Bank for CAF 02 – Q. # 4.5)

LO 9: CHANGE IN CONSUMER EQUILIBRIUM – PRICE EFFECT:

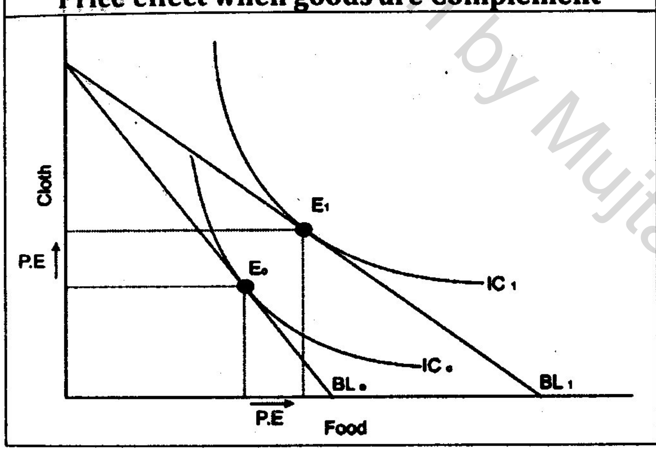
Price Effect (P.E.):

Price Effect is the change in consumer equilibrium (i.e. change in purchases of goods) due to change in price of a good, keeping income constant.

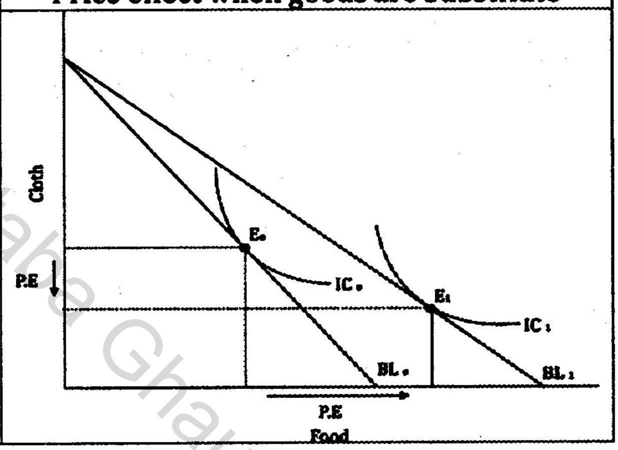
Hints for showing Price Effect in diagrams

Change	Type of Good	Effect on equilibrium quantity
Decrease in Price of Good X	Complement	X Increase, Y Increase
	Substitute	X Increase, Y Decrease
	Independent	X Increase, Y Same
	Giffen	X Decrease

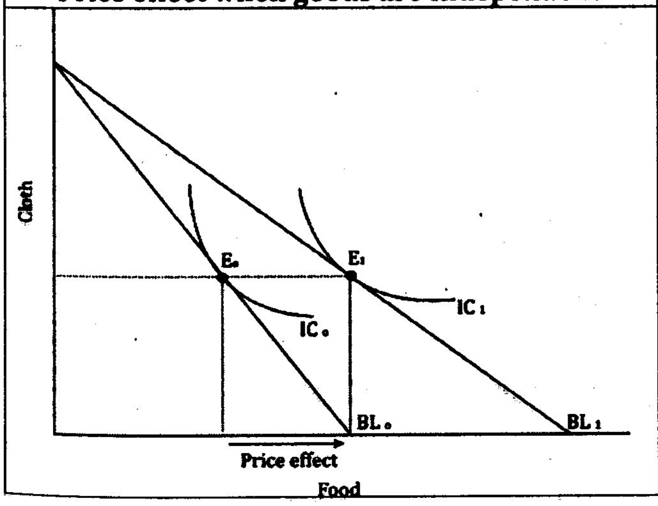
Price effect when goods are Complement



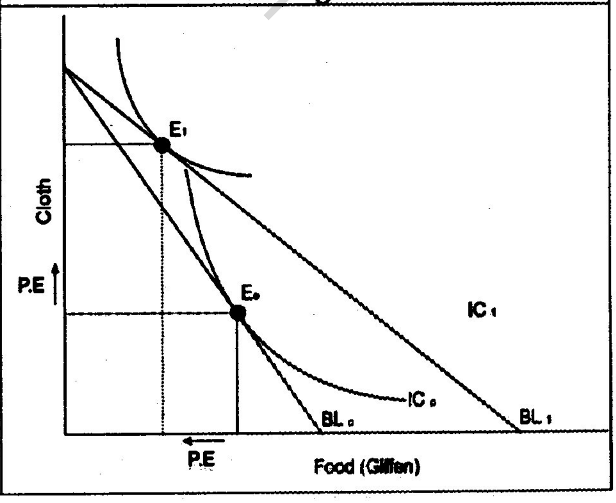
Price effect when goods are Substitute



Price effect when goods are Independent



Price effect when goods are Giffen



Explanation:

1. Units of Good X and Good Y are shown on X-axis and Y-axis respectively.
2. Line BL_0 represents Original Budget Line of the consumer, which is tangent on Indifference curve IC_0 making E_0 as original Equilibrium Point.
3. Now, suppose price of X decreases, which results in new Budget Line BL_1 and new Equilibrium point E_1.
4. Now the difference between quantity of X at E_0 and E_0 is "Price Effect".

Study Tip

If price is changed and we join old and new equilibrium points with a straight line, this line is called Price Consumption Curve (PCC).

Price effect of Decrease in price is shown above; however, you should also be able to show price effect of increase in price.

CONCEPT REVIEW QUESTION

Q. 31

Define price effect and display price effect using diagrams for.

- Substitute goods
- Independent goods
- Complementary goods.

(ICAP's Official Question Bank for CAF 02 – Q. # 4.4)

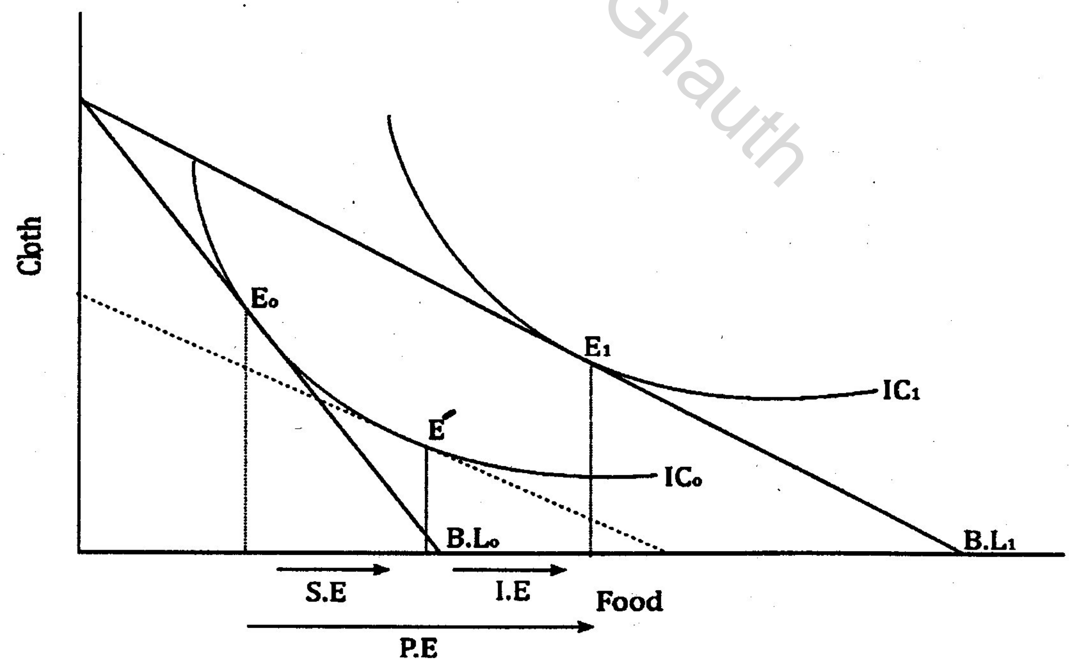
LO 10: CHANGE IN CONSUMER EQUILIBRIUM – EXTENDED ANALYSIS OF PRICE EFFECT:

Extended Analysis of Price Effect:

Price effect can be bifurcated into Substitution Effect and Income Effect.

Price Effect = Substitution Effect (S.E.) + *Real* Income Effect (I.E.)

Diagram:



Explanation:

1. Units of Good X and Good Y are shown on X-axis and Y-axis respectively. Line BL_0 represents Original Budget Line of the consumer, which is tangent on Indifference curve IC_0 making E_0 as original Equilibrium Point.
2. Now, suppose price of X decreases, which results in new Budget Line BL_1 and new Equilibrium point E_1.
3. Now draw a hypothetical budget line which is "parallel to new budget line but tangent to old indifference curve at point E/". This will compensate increase in real income of consumer.
4. Now the Price Effect has been divided into two classes i.e.
   a. Substitution Effect = difference between E_0 and E/.
   (Sliding over same indifference curve due to change in price of good is called Substitution Effect).
   b. Income Effect = difference between E/ and E_1.

Study Tips for extended analysis

1. Do not practice extended analysis with Increase in price. Always decrease price of Good X.
2. Substitution effect is always positive.
3. For normal goods, Income Effect is positive.
4. For inferior goods, Income Effect is negative and does not dominate Substitute Effect.

CONCEPT REVIEW QUESTION

Q. 32
Define substitution effect with reference to indifference curve. **(06)**
(PIPFA – Winter 2015)

Q. 33
Sliding over the same IC is called Substitution effect. Explain with the help of a diagram.
(ICAP's Official Question Bank for CAF 02 – Q. # 4.6)

Q. 34
Explain the following concepts with reference to consumer behaviour, using appropriate diagrams:
- Price effect
- Substitution effect
- Income effect **(12)**

(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 4.3)

Q. 35
In the study of consumer equilibrium, price effect is the aggregate of substitution effect and income effect. Explain it with the help of a diagram assuming that:
- goods are normal and substitute of each other.
- price of one good changes whereas consumer income and price of the other good remain constant. **(08)**

(ICAP, CAF 02 Level-Autumn 2018)

Q. 36
With the help of a diagram, prove that :
Price effect = Income effect + Substitution effect **(08)**
(ICMA Pakistan – Summer 2007)

CHAPTER FIVE

COSTS, REVENUES AND FIRMS

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Questi Bank Referen
PART A – PRODUCTION FUNCTION			
LO 1	LAW OF VARIABLE PROPORTION	5.1.7, 5.1.8, 5.1.9, 5.1.10	5.3, 5.15b
LO 2	RETURNS TO SCALE	5.2.2, 5.2.3	5.4, 5.5
PART B – FIRM'S EQUILIBRIUM			
LO 3	MEANING OF FIRM'S EQUILIBRIUM	5.1.3	5.13a
LO 4	TYPES OF REVENUE	5.3.1	N/A
LO 5	REVENUE CURVES AND THEIR RELATIONSHIP	5.3.2, 5.3.3	N/A
LO 6	TYPES OF COST	5.1.2, 5.1.4	5.7 a&b, 5.
LO 7	COST CURVES AND THEIR RELATIONSHIP	5.1.5, 5.1.6	5.10*
PART D – DIAGRAMS OF FIRM EQUILIBRIUM			
LO 8	HOW TO DRAW DIAGRAM OF FIRM EQUILIBRIUM UNDER DIFFERENT SITUATIONS	N/A	N/A
PART E – TYPES OF FIRMS			
LO 9	PERFECT COMPETITION	5.4.2	5.2, 5.6 c&d, 5 b&c
LO 10	MONOPOLISTIC COMPETITION	5.4.6	5.6a, 5.7e, 5 a&b, 5.16
LO 11	MONOPOLY	5.4.4	5.1, 5.6b, 5.9 5.11, 5.14
LO 12	OLIGOPOLY	5.4.5	5.17, 5.18, 5. 5.20, 5.21

**(To be attempted with graph instead of table)*

***** October 2016 Edition***

PART A – PRODUCTION FUNCTION

A **production function** describes a relationship between inputs (i.e. factors of production) and output (i.e. production), and their impact on cost.

Production funcation can be studied in short-run (called Law of Variable Proportion), as well as in long-run (called Return to Scale).

LO 1: LAW OF VARIABLE PROPORTION:

Law of Variable Proportion:

Law of variable proportion is a short-run concept that shows how productivity increases due to increase in **a** variable factor of production. There are two important phases of Law of Variable Proportion i.e.

1. **Law of increasing return:**
   If more and more units of a variable factor of production (e.g. labor) are added to fixed factors of production (e.g. Land), initially the **marginal product** of variable factor of production will increase.
2. **Law of decreasing return:**
   If we continue adding more and more units of a of a variable factor of production (e.g. labor) are added to fixed factors of production (e.g. Land), after a certain point **marginal product** of variable factor of production will decrease.

> **Study Tip – Relationship between Returns and Marginal Cost**
> In case of increasing returns, marginal cost decreases.
> In case of decreasing returns, marginal cost increases.
> In case of constant returns, marginal cost remains constant (constant return is a rare situation in which marginal productivity remains same with increase in variable factor of production).

Assumptions:

1. **Short-run Period:**
   Law is valid in short-run so that some factors of production are held fixed.

2. **Variable Factors of Production are Homogenous:**
   Every unit of variable factor of production should be identical in quality.

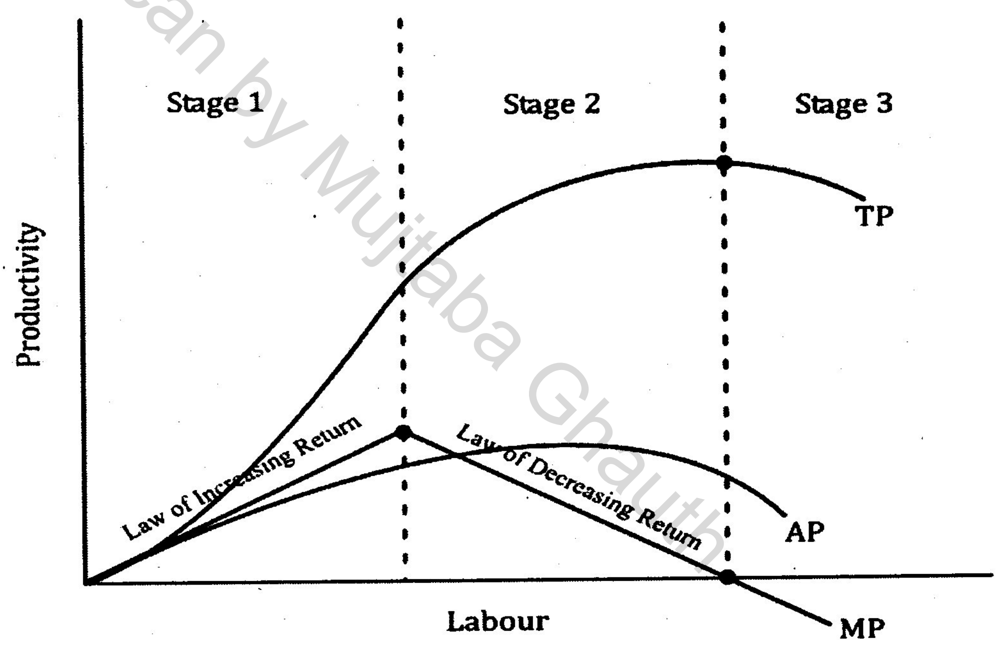
3. **Possibility to combine factors:**
   Variable and fixed factors of production can be combined (or are compatible) to make a product.

4. **Constant Technology:**
   Technology and technique of production should remain same. A more efficient technology or method of production may give different result.

Schedule/Table:

Fixed Factor of Production (i.e. Land)	Variable Factor of Production (i.e. Labor)	Total Product (Output)	Marginal Product (ΔTotal Product / Δ in Labor)	Average Product (Total Product / Total Labor)
1	0	-	-	-
1	1	1	1	1.00
1	2	3	2	1.50
1	3	6	3	2.00
1	4	8	2	2.00
1	5	9	1	1.80
1	6	9	0	1.50
1	7	8	- 1	1.14

Diagram:



Explanation:

Stage 1: Stage (or Law) of increasing returns/Productivity:
In this state, marginal productivity increases if we increase variable factor of production. This stage is shown in the tal from unit 1 till unit 3.

Stage 2: Stage (or Law) of diminishing returns/Productivity:
In this state, marginal productivity decreases if we increase variable factor of production. This stage is shown in the ta from unit 4.

Relationships between Productivity Curves:
Relationship between MP and TP:

1. If MP is positive, TP increases.
2. If MP is zero, TP is maximum.
3. If MP is negative, TP decreases.

Relationship between MP and AP:

1. If MP > AP, AP increases.
2. If MP = AP, AP is at its maximum.
3. If MP < AP, AP decreases.

Study Tips

1. Terms "product", "output" and "Return" are synonymously used in economics.
2. Law of increasing return and Law of diminishing returns are the reasons of U-Shape of MC and AC in short-run.

CONCEPT REVIEW QUESTIONS

Q. 1
Describe the law of variable proportion. Also state the assumptions on which the law of variable proportion is based. **(03)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 2
Explain the law of variable proportions. Discuss the various stages of law of variable proportions with the help of a diagram (schedule not required). Also explain at which stage a rational producer would stop production. **(10)**
(ICAP, CAF 02 Level – Spring 2016)

Q. 3
What do you understand by the laws of increasing returns and diminishing returns? List four basic assumptions underlying the law of diminishing returns. **(04)**
(ICAP, CAF 02 Level – Spring 2019)

Q. 4
Explain briefly why the short-run average cost curve is "U" shaped. **(06)**
(ICAP, CAF 02 Level – Spring 2012)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.15b)

Q. 5
State and explain "The law of diminishing marginal returns" with the help of a schedule and a diagram. **(12)**
(ICMA Pakistan – Summer 2007)

Q. 6
Explain the law of increasing returns. How does the law apply in the case of a manufacturing industry?
(ICAP, CAF 02 Level – Autumn 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.3)

Q. 7
Fill in the missing values for Marginal, Average, and Total Product in the following table. Assume that Capital and Labor are the only two inputs in production function and that capital is held fixed:

Units of Labor	Total Product	Marginal Product	Average Product
6	120	0	20
7	147	?	21
8	?	21	?
9	?	?	20

(04)
(PIPFA-Summer 2018)

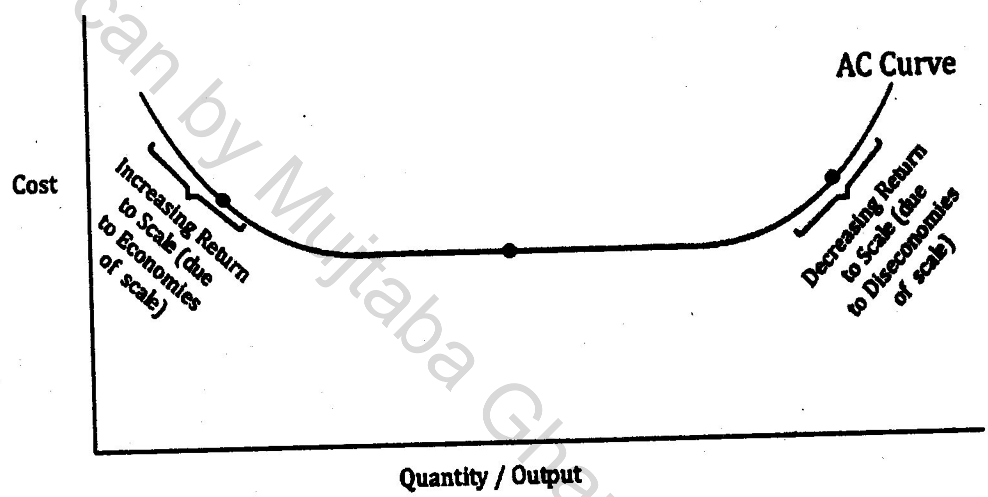
LO 2: RETURNS TO SCALE:

Return to Scale:
Returns to scale is a long-run concept that shows how output increases due to increase in **all** inp
There are two important phases of Return to Scale i.e.

1. Increasing returns to scale: If increase in all inputs leads to a more-than-proportic increase in output, this is called Increasing return to scale. It occurs due to Economie Scale. During this phase, Long-run average cost of firm decreases.

2. Decreasing returns to scale: If increase in all inputs leads to a less-than-proporti increase in output, this is called Decreasing return to scale. It occurs due to Diseconomie Scale. During this phase, Long-run average cost of firm increases.

Diagram:



This diagram shows effect of return to scale on average cost of the firm.

Economies of Scale:

Definition:
These are the advantages of large scale production in long-run which cause increase in retu scale and decrease in long-run average total cost.

Internal Factors/Reasons of Economies of Scale:
Internal economies of scale arise from within the firm, by making efficient use of resources e.g
1. Mechanical/Technical Economies (a single large machine is cheaper as compared to small machines)
2. Managerial Economies (large business take advantage of employing specialized labou
3. Trading/Commercial Economies (Inputs becomes cheaper when purchased in quantities due to discounts)
4. Financial Economies (large firms can negotiate loan or issue shares at favourable tern
5. Risk-bearing Economies (large firms manage/reduce their risk by diversificat products or markets).

External Factors/Reasons of Economies of Scale:
These are outside the control of a particular firm and are attained by the member firms due to growth of the industry as a whole.

For example, firms may cluster together to perform:
- joint research & development activities,
- development of specialized labor force.
- sharing extra-risk with each other (e.g. in Insurance companies)

Diseconomies of Scale:

Definition:
These are the disadvantages of large scale production in long-run (firms grows so large, that it becomes difficult to handle them) which cause decrease in return to scale and increase in long-run average total cost.

Factors/Reasons of Diseconomies of Scale:
Organizations face following problems when they grow:
1. it becomes difficult to control or motivate employees to ensure work is carried out properly.
2. it becomes difficult to communicate and coordinate work, increasing the risk of duplication or omission of work.
3. it causes delay in decision making.
4. It causes wear and tear in infrastructure due to large scale productions.

CONCEPT REVIEW QUESTIONS

Q. 8
Explain the concept of economies and diseconomies of scale with the help of long run average cost curve. Also mention two factors that lead to economies and diseconomies of scale. (07)
(ICAP, CAF 02 Level-Autumn 2018)

Q. 9
Define the term 'Economies of scale'? Describe any four ways by which a firm may achieve internal economies of scale. (06)
(ICAP, CAF 02 Level – Spring 2017)

Q. 10
What is the difference between 'Returns to scale' and 'Law of variable proportions'. (02)
(ICAP, CAF 02 Level – Autumn 2013)

Q. 11
Briefly discuss the term 'Returns to scale' and distinguish between the different phases of returns to scale. (04)
(ICAP, CAF 02 Level – Autumn 2013)

Q. 12
What is meant by "Decreasing returns to scale"? Describe its main causes. (06)
(ICAP, CAF 02 Level – Autumn 2012)

PART B – FIRM'S EQUILIBRIUM

LO 3: MEANING OF FIRM'S EQUILIBRIUM:

Firm's Equilibrium means level of Price and Output at which firm earns maximum profit. It is t point where MC = MR and MC cuts MR from below.

There are two types of firms, and two types of equilibrium in each type of firm i.e.

1. Firm under perfect competition (Long-run equilibrium and Short-run equilibrium)
2. Firm under imperfect competition (Long-run equilibrium and Short-run equilibrium)

Study Tip

1. Profit = Total Revenue – Total Cost
2. **Short run is** a period of time in which some factors of production are fixed, and some are variable. In short-run, some of the cost will be fixed and some variable.
3. **Long run** is a period of time in which all factors of production are variable. In long-run, all of the cost will be variable.
4. **Very long run** is a period of time in which the factors outside the firm's control (exogenous factors) can also vary e.g. technology, government regulations, social customs.

CONCEPT REVIEW QUESTION

Q. 13

Explain the term Equilibrium of the Firm. (C

(ICAP, CAF 02 Level – Spring 201

(ICAP's Official Question Bank for CAF 02 – Q. # 5.1

Q. 14

Differentiate between Short-Run and Long-Run in relation to Cost. (C

(ICAP, CAF 02 Level – Autumn 200

LO 4: TYPES OF REVENUE:

Total Revenue:

Total Revenue means revenue from the sale of all output i.e.

Total Revenue = Average Revenue * Total Output

Marginal Revenue:

Marginal Revenue is the increase in total revenue because of increase in sale of an additional unit.

Marginal Revenue = Change in Total Revenue / Change in Output

Average Revenue: (also called **Price**)

Average Revenue = Total Revenue / Units of Output

Study Tip

In Economics, decisions are made on the basis of Marginal Revenue, and Average Revenue.

CONCEPT REVIEW QUESTIONS

Q. 15
What is meant by Marginal Revenue? **(03)**
(ICAP, CAF 02 Level – Spring 1997)

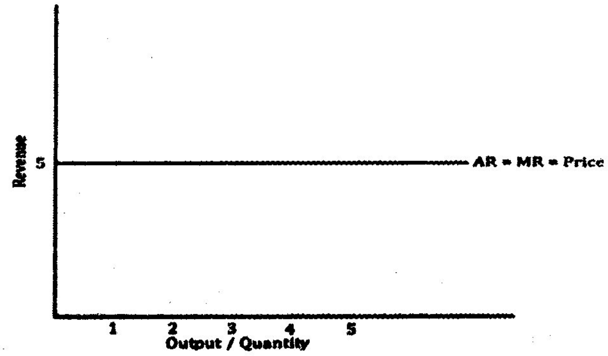
LO 5: REVENUE CURVES AND THEIR RELATIONSHIP:

Revenue Curves under Perfect Competition:

In perfect competition, price remains same at all level of output. Therefore, Price, Average Revenue, Marginal Revenue remain same.

Schedule and Graph:

Quantity	Price	Total Revenue	Average Revenue	Marginal Revenue
(Q)	(P)	TR = Q * P	AR = TR / Q	*(MR = ΔTR/Δq)*
1	5	5	5	5
2	5	10	5	5
3	5	15	5	5
4	5	20	5	5
5	5	25	5	5

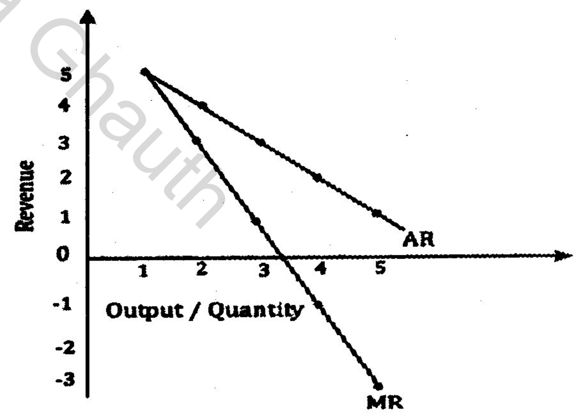


Revenue Curves under Imperfect Competition:

In imperfect competition, firms have to reduce price to sell more. Therefore, Average Revenue and Marginal Revenue both have downward slope.

Schedule and Graph:

Quantity	Price	Total Revenue	Average Revenue	Marginal Revenue
(Q)	(P)	TR = Q * P	AR = TR / Q	*(MR = ΔTR/Δq)*
1	5	5	5	5
2	4	8	4	3
3	3	9	3	1
4	2	8	2	-1
5	1	5	1	-3



Study Tip

1. Revenue curves under perfect competition are different from imperfect competition.
2. "Average Revenue = Price" and "AR Curve = Demand Curve".

CONCEPT REVIEW QUESTIONS

Q. 16
Explain, with reasons, the relationship among marginal revenue, average revenue and price under perfect competition. **(06)**
(ICAP, CAF 02 Level – Autumn 2007)

Q. 17
Explain the relationship between AR, and MR under monopoly.
(ICMA Pakistan - Fall 2011)

LO 6: TYPES OF COST:

Total Cost:
Total Cost means cost of the production of all units i.e.

Total Cost = Fixed Cost + Variable Cost.
OR
Total Cost = Average Cost * Output

Fixed Cost:
Fixed costs are those costs which do not vary with the level of output. It will still have to be paid even if output is zero.

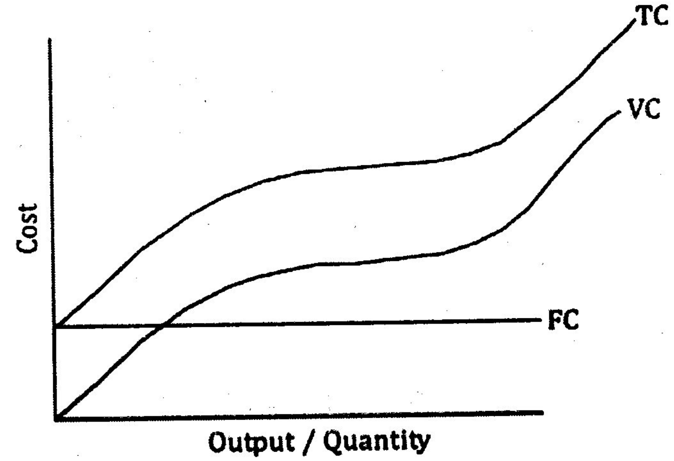
Examples include: Rent of factory, Insurance Expense, Property Taxes, Interest on capital.

Variable Cost:
Variable costs are those costs which vary with the level of output. These will change with every unit of production.

Examples include: Purchase of material, Wages paid to labor, Energy Cost (e.g. Electricity and Fuel etc. at factory).

Study Tip - Economists add Implicit Cost
Explicit Cost is the cost that requires a monetary payment e.g. Rent paid for factory, Wages paid to labor, Interest paid on loan.
Implicit Cost is the cost that does not require a monetary payment e.g. Normal profit, Opportunity cost.
Accountants do not include implicit cost in total cost, however economists include this in total cost.

Diagram of Fixed and Variable Cost:



Marginal Cost:
Marginal Cost is the increase in total cost because of production of an extra unit.

Marginal Cost = ΔTC / ΔQ (i.e. Change in Total Cost / Change in Output)

Average Fixed Cost:

Average Fixed Cost (AFC) = Fixed Cost / Units of Output

Average Variable Cost:

Average Variable Cost (AVC) = Variable Cost / Units of Output

Average Total Cost: (also called Average Cost)
Average Cost is the unit cost of producing product at a given level of output.

Average Total Cost (ATC or AC) = Total Cost / Units of Output

Study Tip
In Economics, decisions are made on the basis of Marginal Cost, and Average Cost.

CONCEPT REVIEW QUESTIONS

Q. 18
Distinguish between fixed cost and variable cost with the help of a diagram. **(04)**
(ICMA Pakistan – Summer 2012)

Q. 19
Differentiate the Explicit Cost & Implicit Cost. **(05)**
(ICAP, CAF 02 Level – Spring 2004)

Q. 20
The following data refers to the total revenue and total costs of a firm at various output levels:

Output (units in million)	0	1	2	3	4	5	6	7	8	9
Marginal revenue (Rs. In million)	-	12	12	12	11	11	10	10	10	9
Total costs (Rs. in million)	22	28	32	35	36	37	40	44	54	65

(a) Calculate the firm's fixed cost and the marginal cost at each level of output. (03)
(b) Determine the level of output at which the firm would optimise its profits. Also determine the amount of profit that the firm will make at the desired level of output. (05)
(ICAP, CAF 02 Level – Autumn 2016)

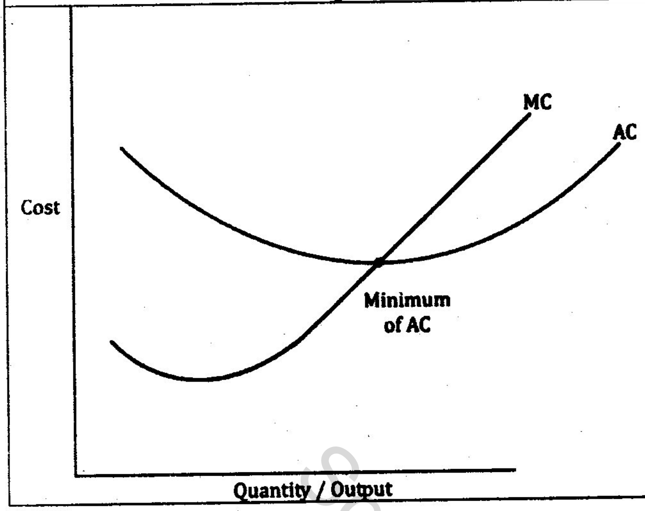
LO 7: COST CURVES AND THEIR RELATIONSHIP:

Schedule:

Output	Fixed Cost	Variable Cost	Total Cost	Marginal Cost (ΔTotal Cost/ Δ in Output)	Average Cost (Total Cost/ Total Output)
0	10	0	10	-	-
1	10	10	20	10	20.0
2	10	19	29	9	14.5
3	10	27	37	8	12.3
4	10	34	44	7	11.0
5	10	45	55	11	11.0
6	10	65	75	20	12.5
7	10	100	110	35	15.7

Graph and Explanation:

Graph



Explanation

Cost curves (AC and MC) are U-shaped because of law of increasing returns and law of diminishing returns.

Relationship between MC and AC Curve

Marginal Cost curve intersects the Average Cost curve at its minimum point from below which means;

1. If MC < AC, AC decreases.
2. If MC = AC, AC is at its minimum.
3. If MC > AC, AC increases.

CONCEPT REVIEW QUESTIONS

Q. 21

Explain the relationship between Marginal Cost and Average Cost using appropriate diagram.

(PIPFA – Winter 2017)

Q. 22 **(07)**

Complete the following table:

Q	FC	AFC	VC	AVC	TC	ATC
1	30	?	?	25	?	?
2	?	15	40	?	?	35
3	?	?	54	18	?	28
4	30	?	80	?	?	?
5	?	?	110	?	140	?

(ICMA Pakistan – Summer 2015)

PART D – DIAGRAMS OF FIRM'S EQULIBRIUM (COMBINING REVENUE CURVES AND COST CURVES)

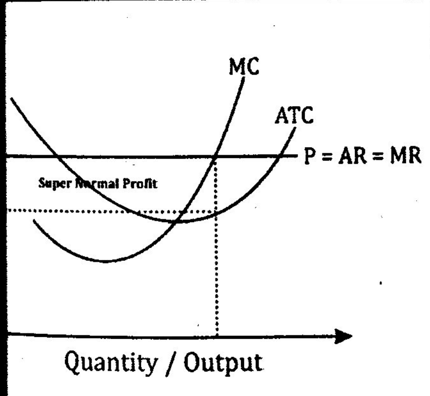
LO 8: HOW TO DRAW DIAGRAM OF FIRM EQUILIBRIUM UNDER DIFFERENT SITUATIONS:

Rules to draw Diagrams of firms' equilibrium:

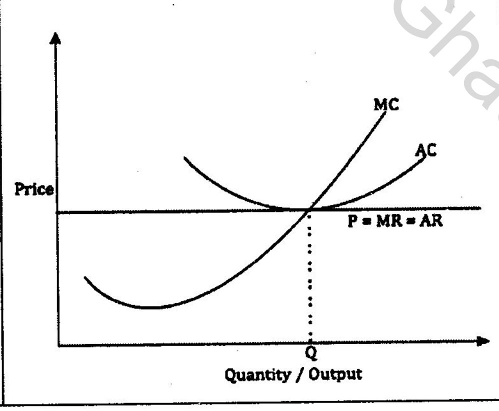
1. You will need 4 curves to draw equilibrium point of firms under different competitions i.e.
   a. Marginal Revenue and Average Revenue Curves.
   b. Marginal Cost and Average Cost Curve.
2. First draw both Revenue Curves i.e. MR Curve & AR Curve (depending on whether firm is in perfect competition or imperfect competition).
3. Then draw Marginal Cost Curve and identify Equilibrium Quantity. Equilibrium Quantity is the quantity at which "Marginal Cost = Marginal Revenue".
4. Now draw Average Cost Curve (depending on whether firm is in profit, breakeven or loss) i.e.
   a. To draw graph for Super-normal Profit (called profit in accounting), AC Curve should pass below AR Curve at equilibrium quantity.
   b. To draw graph for Normal Profit (called break-even in accounting), AC Curve should pass at AR Curve at equilibrium quantity.
   c. To draw graph for Sub-normal Profit (called loss in accounting), AC Curve should pass above AR Curve at equilibrium quantity.
5. In the given diagram,
   a. Total Revenue = Equilibrium Quantity * Average Revenue (at equilibrium quantity)
   b. Total Cost = Equilibrium Quantity * Average Cost (at equilibrium quantity)
   c. Profit = Total Revenue – Total Cost

Examples of Diagrams under Perfect Competition:

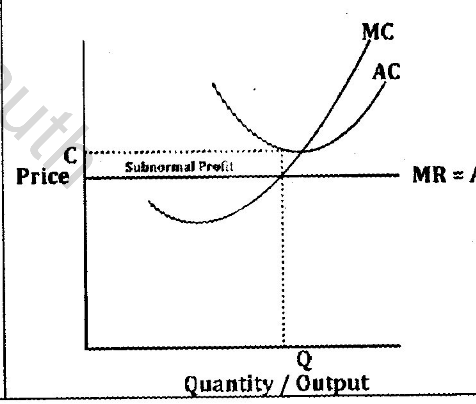
(a) Super-normal Profit



(b) Normal Profit

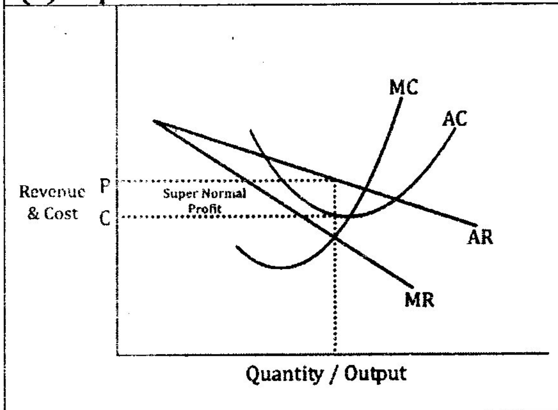


(c) Sub-normal Profit

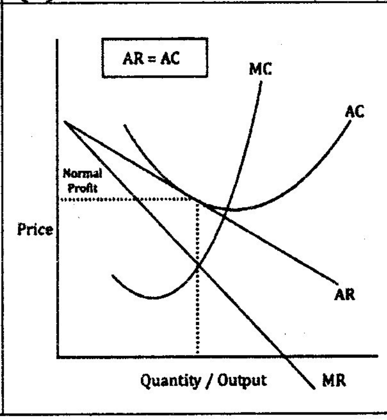


Examples of Diagrams under Imperfect Competition:

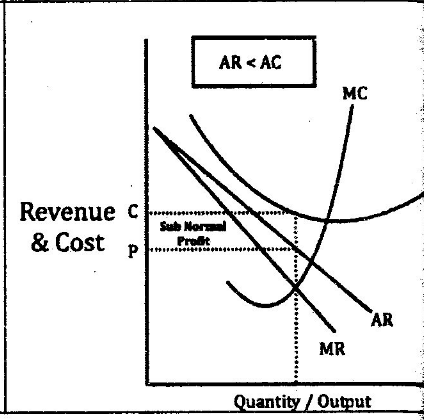
(a) Super-normal Profit



(b) Normal Profit



(c) Sub-normal Profit



CONCEPT REVIEW QUESTIONS

Q. 23
What is meant by Normal Profit? **(05)**
(ICAP, CAF 02 Level – Spring 2003)

PART E – TYPES OF FIRMS

LO 9: PERFECT COMPETITION:

Definition of Perfect Competition:

"A situation in industry where large numbers of sellers are selling homogenous products."

Examples:

- Wheat market
- Chicken market
- Egg market

Conditions/Features/Characteristics of Perfect Competition:

Following are the conditions which are necessary for the existence of perfect competition:

Large number of sellers:
There are large number of small firms. Each firm is too small to influence the market price.

Homogenous Product:
All firms produce homogeneous products i.e. product of one firm is identical to the product of other firms, and are perfect substitutes.

Free entry and exit:
There are no barriers to entry. Firms can easily enter and exit the market with fluctuations in profit.

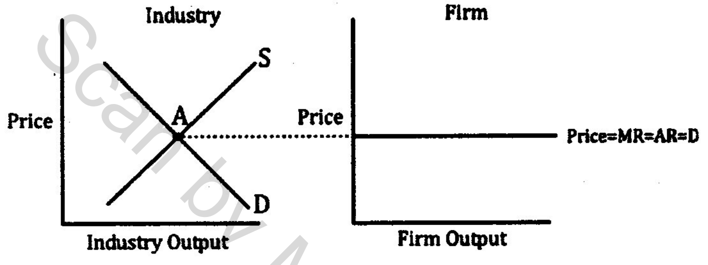
Perfect knowledge of price:
Buyers and sellers are fully aware of prices. Therefore, no producer can charge price different than market price.

Transportation costs are negligible:
Because of zero transportation cost, price-discrimination at different location is not possible.

Perfect mobility of factors of production:
Therefore, factors of production can easily move 'in' or 'out' of the market to increase or decrease supply in accordance with demand.

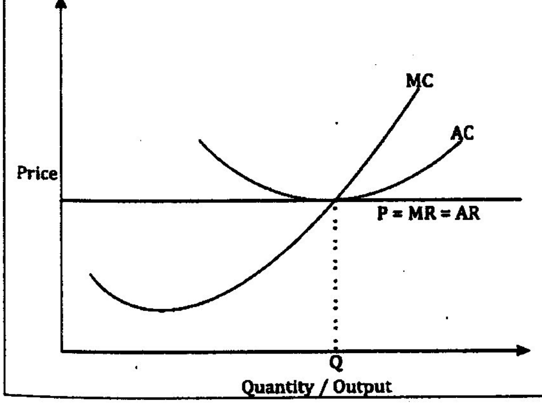
Firms are Efficient:
The firm under perfect competition produces efficiently in long-run where Average Cost is at minimum.

Firms are Price Takers:
Firm has no control over price; and price is determined by market demand and supply). Demand curve of firms is perfectly elastic.



Study Tip
1. Marginal Cost curve (upward sloping) of **all** firms is also their Supply curve; and Average Revenue Curve of **all** firms is also their Demand Curve.
2. For a firm under perfect competition, Average Revenue (i.e. Price) = Marginal Revenue
3. For a firm under imperfect competition, Average Revenue (i.e. Price) > Marginal Revenue

__Long-run Equilibrium under Perfect Competition:__
In long run, a firm under perfect competition will be earning Normal Profit only.

Diagram	Explanation
	1. In perfect competition, no buyer and seller is in a position to influence the price therefore same price prevails in the market i.e. MR = AR = P (Price). 2. The firm will produce as long as MR>MC. Firm's profit maximization (or equilibrium point) will be where MC = MR and MC cuts MR from below. 3. Here firm is earning normal profit at equilibrium quantity. 4. At equilibrium quantity, AC curve is tangent to AR curve i.e. AR = AC.

<u>Short-run Equilibrium under Perfect Competition:</u>

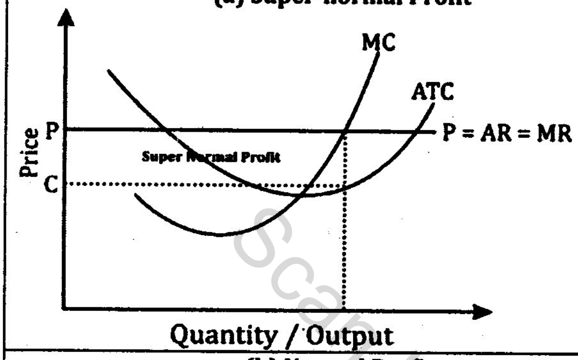
In short run, a firm under perfect competition can earn Super-normal Profit, Normal Profit or Sub-normal profit.

Graphs:

In perfect competition, no buyer and seller is in a position to influence the price therefore same price prevails in the market. The firm will produce as long as MR>MC. Firm's profit maximization (or equilibrium point) will be where MC = MR and MC cuts MR from below.

<table>
<tr><th>Diagram</th><th>Further Explanation</th></tr>
<tr><td>

(a) Super-normal Profit

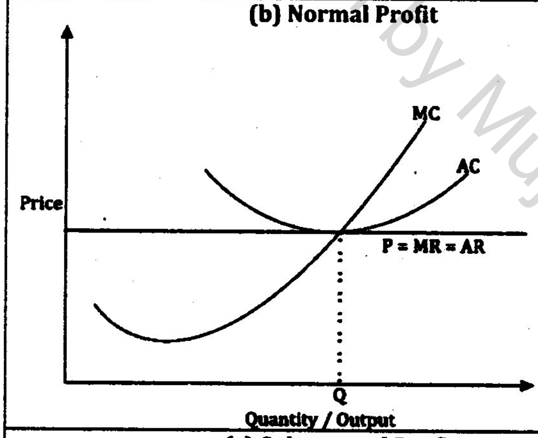


</td><td>

1. Here firm is earning supernormal profit at equilibrium quantity.
2. Supernormal profit is the difference between Total Revenue (i.e. Average Revenue * Quantity) and Total Cost (i.e. Average Cost * Quantity).
3. Super-normal profit is measured by rectangle area as shown by shaded area.

</td></tr>
<tr><td>

(b) Normal Profit

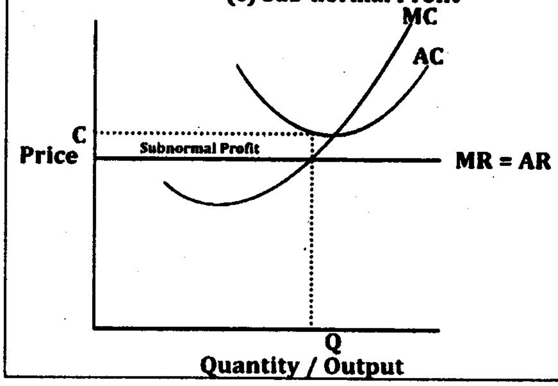


</td><td>

1. Here firm is earning normal profit at equilibrium quantity.
2. At equilibrium quantity, AC curve is tangent to AR curve i.e. AR = AC

</td></tr>
<tr><td>

(c) Sub-normal Profit



</td><td>

1. Here firm is earning subnormal profit at equilibrium quantity.
2. Subnormal profit is the difference between Total Cost (i.e. Average Cost * Quantity) and Total Revenue (i.e. Average Revenue * Quantity).
3. Sub-normal profit is measured by rectangle area as shown by shaded area.

</td></tr>
</table>

Restoration of short-run equilibrium to long-run equilibrium:

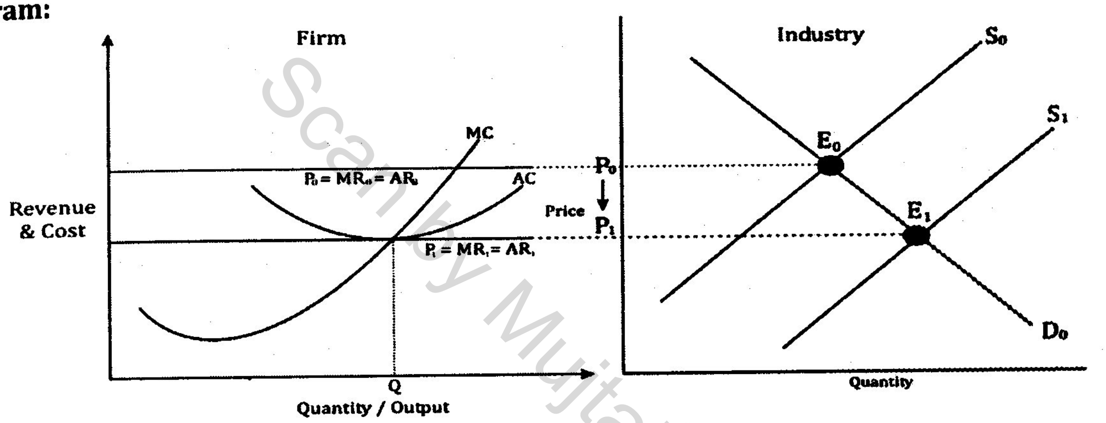
Although a firm under perfect competition can earn super-normal profit, normal profit or sub-normal profit in short-run but they can earn only normal profit in the long-run.

If firms are initially earning super-normal profit because of high prices, new firms to enter the market causing rightward shift in supply curve and decrease in price to a level equal to average total cost.

In case of sub-normal profit, some existing firms will exit the market causing leftward shift in supply curve and increase in price to a level equal to average total cost.

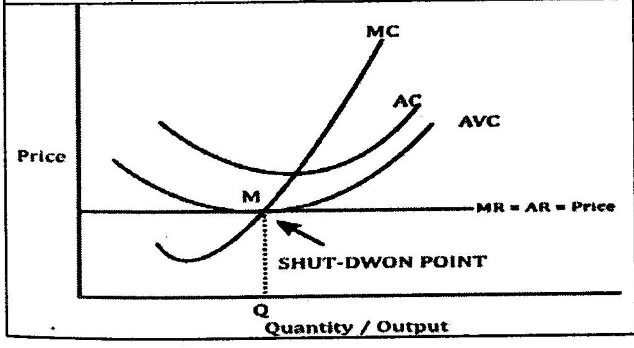
Therefore, in the long-run, price always moves back to the position where all firms are earning normal profits.

Diagram:



Shut-down Point under Perfect Competition:

"Shut-down point is the point in short-run, where price is equal to average variable cost (AVC). Firm will stop its production if price falls before AVC."

Diagram	Explanation
	The point at which **Price =AVC** is called "shut-down point", because if price is below *AVC* and a firm continues to produce, losses will include not only fixed costs but also a portion of variable costs. If Price > AVC, firm will not shut-down its production (even if it incurs some loss), because firm will cover all of its variable cost and also some portion of fixed cost. If production is stopped, loss will increase.

CONCEPT REVIEW QUESTIONS

Q. 24
What is Perfect Competition? Briefly explain the characteristics of Perfect Competition. **(06)**
(PIPFA-Summer 2018)

Q. 25

(a) Briefly describe the important characteristics of a market under perfect competition. **(05)**

(b) Explain the equilibrium of a firm under perfect competition, with the help of an appropriate diagram. **(05)**

(ICAP, CAF 02 Level – Autumn 2008)

(ICAP's Official Question Bank for CAF 02 – Q. # 5.2)

Q. 26

What do you understand by the term Perfect Competition? With the help of an appropriate diagram, explain the Equilibrium of a Firm under perfect competition in the long run. **(08)**

(ICAP, CAF 02 Level – Autumn 2016)

Q. 27

Allied Private Limited is a perfect competitor firm. It is earning supernormal profit in the short run period. Make a diagram that expresses the supernormal profit of Allied Private Limited. **(06)**

(PIPFA – Summer 2016)

Q. 28

Describe a firm's equilibrium under perfect competition in the short run with the help of diagrams. **(15)**

(ICMA Pakistan – Summer 2005)

Q. 29

Explain with the help of a diagram, the shut down point of a firm under perfect competition. **(06)**

(ICAP, CAF 02 Level – Spring 2012)

LO 10: MONOPOLISTIC COMPETITION:

Definition and Examples of Monopolistic Competition:

Definition:

Monopolistic Competition is a market structure in which many numbers of sellers produce similar, but not homogenous goods. Each seller has slight influence on price and output but cannot control the market as whole.

Examples:

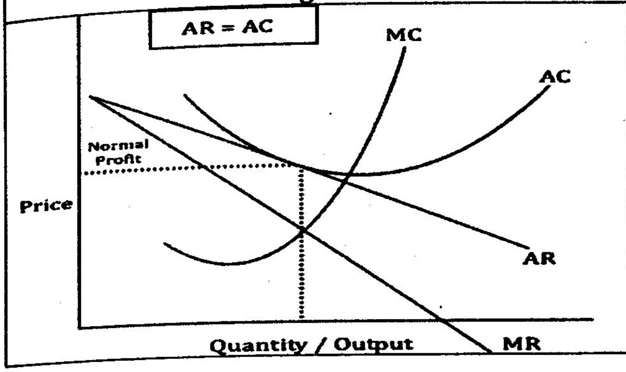
- Haircuts
- Shoes
- Soaps
- College text-books
- Shampoos
- Toothpastes

Features of Monopolistic Competition:

- Many producers.
- Knowledge is widespread, but not perfect.
- Non-homogenous products.
- Producers have some influence over price (i.e. they are price makers).
- Barriers to entry and exit do exist, but are low.
- Brand loyalty exists, making demand inelastic.
- Firms engage in marketing.

Long-run Equilibrium under Monopolistic Competition:

In long run, a firm under monopolistic competition can earn Normal Profit only.

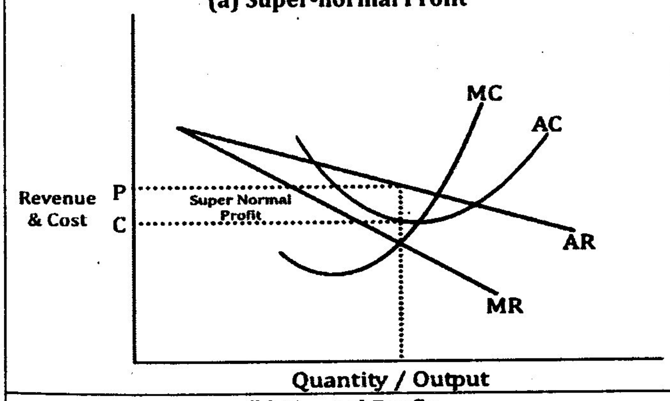
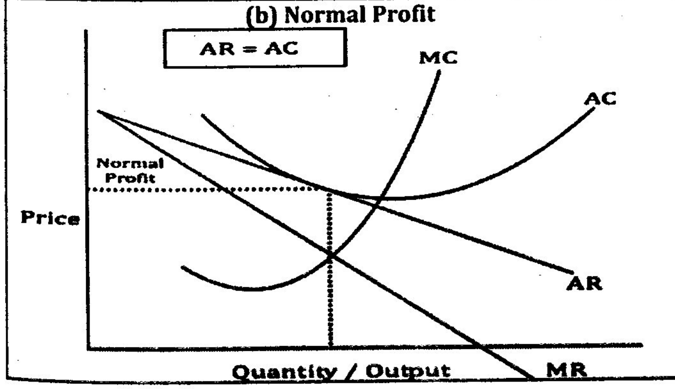
Diagram	Explanation
	1. In monopolistic competition, firm is able to influence price. Its AR curve and MR curve are downward sloping and are not identical because firm has to reduce its price to sell more output. 2. The firm will produce as long as MR>MC. 3. The profit of the firm will maximize when MC = MR and MC cuts MR from below, which is also the firm's equilibrium point. 4. Here firm is earning normal profit at equilibrium quantity. 5. At equilibrium quantity, AC curve is tangent to AR curve i.e. AR = AC

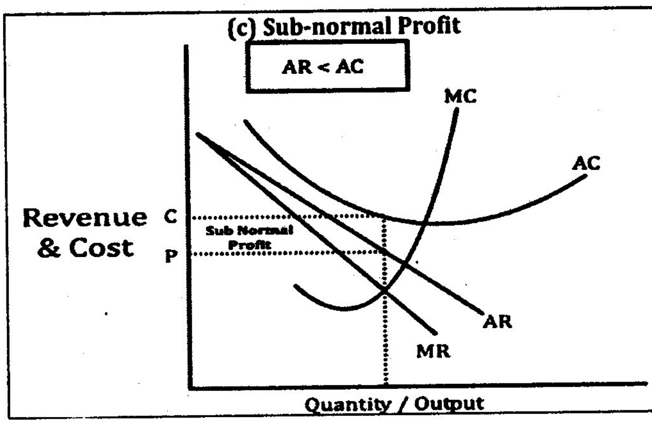
Short-run Equilibrium under Monopolistic Competition:

In short run, a firm under monopolistic competition can earn Super-normal Profit, Normal Profit or Sub-normal profit.

Graphs:

In monopolistic competition, firm is able to control price. Its AR curve and MR curve are downward sloping and are not identical because firm has to reduce its price to sell more output. The firm will produce as long as MR>MC. Firm's profit maximization (or equilibrium point) will be where MC = MR and MC cuts MR from below.

Diagram	Further Explanation
(a) Super-normal Profit 	• Here firm is earning supernormal profit at equilibrium quantity. • Supernormal profit is the difference between Total Revenue (i.e. Average Revenue * Quantity) and Total Cost (i.e. Average Cost * Quantity). • Super-normal profit is measured by rectangle area as shown by shaded area.
(b) Normal Profit 	• Here firm is earning normal profit at equilibrium quantity. • At equilibrium quantity, AC curve is tangent to AR curve i.e. AR = AC



- Here firm is earning subnormal profit at equilibrium quantity.
- Subnormal profit is the difference between Total Cost (i.e. Average Cost * Quantity) and Total Revenue (i.e. Average Revenue * Quantity).
- Sub-normal profit is measured by rectangle area as shown by shaded area.

Study Tip – Effect of Increase in Consumer's income on Equilibrium

1. Marginal Revenue (MR) and Average Revenue (AR), both will rise upward.
2. New equilibrium point will be at a higher price and higher output. Firm's profit will be increased.

Study Tip – Effect of Increase in Firm's Cost on Equilibrium

1. Marginal Cost (MC)and Average Cost (AC), both will rise upward.
2. New equilibrium point will be at higher price and lower output. Firm's profit will be reduced.

Advantages and Disadvantages of Monopolistic Competition:

Advantages of Monopolistic Competition:

- No significant barriers to entry.
- Differentiation increases consumer choice.
- More efficient than Monopoly.

Disadvantages of Monopolistic Competition:

- Differentiation can be unnecessary. Resources spent on advertisement can be spent on oth useful projects for society.
- Prices are higher as compared to perfect competition.

CONCEPT REVIEW QUESTIONS

Q. 30
What is meant by Monopolistic-Competition? Enumerate its main characteristics. (6
(ICAP, CAF 02 Level – Spring 20

Q. 31
Explain the short and long run equilibrium of a firm under monopolistic competition with the help of diagrams. (1
(ICAP, CAF 02 Level – Spring 20

Q. 32
Explain with the help of an appropriate diagram, the price output determination under monopolistic competition in short-run. (
(ICAP, CAF 02 Level – Autumn 20
(ICAP's Official Question Bank for CAF 02 – Q. # 5.

LO 11: MONOPOLY:

Definition of Monopoly:

Definition:

"Monopoly is a market situation in which there is only one single supplier with complete control over output and price, selling unique product (with no close substitute)."

Examples:

- Local utility companies providing water, electricity (e.g. WASA, LESCO).
- Pakistan Railway
- A pharmaceutical company discovers a new drug and gets it patented.
- Microsoft Windows.

Features of Monopoly:

1. Single supplier of good to whole market.
2. Product is unique and there is no close substitute.
3. Very high **barriers of entry.**
4. Firm is price maker, and can practice **Price Discrimination.**
5. Firm earns super normal profit in long-run.
6. Firm does not product at minimum average cost i.e. it is **Inefficient.**
7. Prices are high and output is low as compared to other market structures.

Advantages and Disadvantages of Monopoly:

Advantages of Monopoly:

1. A single large firm may be able to achieve economies of scale which will lower unit cost.
2. A monopoly earns super-normal profit in the long-run, which means they can allocate huge resources to research and development activities to improve quality of product.
3. Firm can operate internationally at much more competitive rates.
4. Investments and Decisions are made considering long-term approach.

Disadvantages of Monopoly:

1. There is insufficient utilization of resources as firm is already earning huge profits.
2. Less motivated towards innovation.
3. Price is higher and output is low as compared to other market structures.
4. Price discrimination may decrease consumers' welfare/surplus.
5. There is less choice for consumers.
6. There is less sovereignty for consumers.
7. Different types of inefficiencies may arise e.g. Technical inefficiencies, Productive inefficiencies, and X-inefficiencies.

Barriers to entry in Monopoly:

Barriers to entry are factors which make it difficult for new firms to enter a market. These could be:

1. **Legal** *(i.e. Barriers enforced by law to protect a monopolist)*
   - Patents
   - Copyrights
   - Licenses

2. **Strategic** *(i.e. Barriers enforced by monopolist to make entry harder)*
   - Predatory pricing (selling goods at much lower price to drive other firms out of the market, and then increasing the price again once they leave)
   - Product differentiation (creating brand loyalty).

3. **Structural** *(i.e. enforced by differences in production process)*
   - High fixed cost of infrastructure (called natural monopoly)
   - Economies of scale.
   - Control over resources
   - Expertise/ reputation of monopolist
   - Vertical integration

Inefficiencies in Monopoly:

Technical Inefficiency:

A firm is technically inefficient when it is not producing the maximum output from the minimum quantity of inputs e.g. using too many employees to produce output.

Productive Inefficiency:

Productive inefficiency occurs when a firm is not producing at its lowest unit cost.

X-Inefficiency:

X-inefficiency is when a firm fails to be technically efficient because of absence of competitive pressures. e.g. lack of motivation to follow best practices.

Price Discrimination:

Definition:

Price discrimination means charging different consumers different prices for the same product. Firms want to charge higher prices to consumers whose demand is highly inelastic.

Examples of Price Discrimination:

1. LESCO charging different prices for electricity from domestic and commercial users.
2. Railway charges different rates for different commodities.

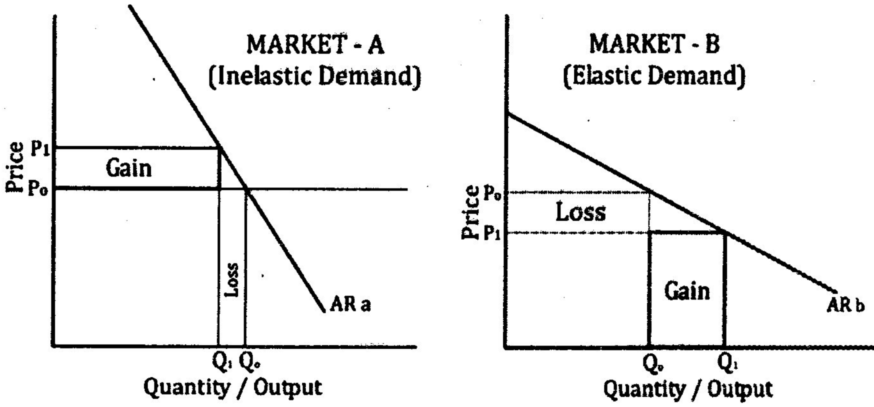
Conditions required for Price discrimination:

1. **Monopoly Power:**
   Seller must keep competitors out of the market to have control over supply and prices.

2. **Separation of Markets:**
   There must be atleast two different group of buyers. Seller must be able to prevent resale of product by buyers paying lower price to buyer paying higher price.

3. **Different Elasticity of Demand**
   Each group of buyer must have a different elasticity of demand to extract consumer surplus.

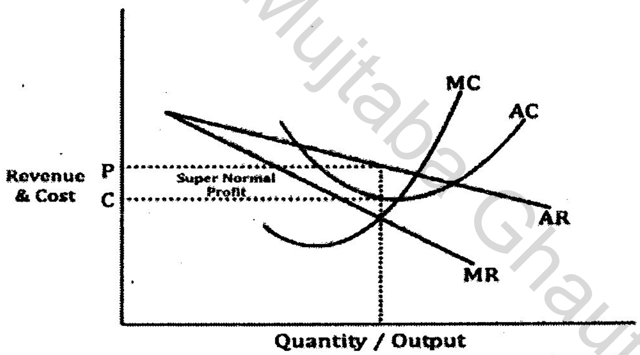
How a firm uses Price Discrimination to maximize Revenue:



Gain in both markets > Loss in both markets

A monopolist can increase its supernormal profit by charging higher price in market where demand is inelastic (market A) and charging lower price in market where demand is highly elastic (market B).

Equilibrium under Monopoly:



AR & MR curves of the firm are downward. Firm make super-normal profit by charging price above average cost.

Firm does not produce efficiently, because it is not at lowest AC. It raises price by cutting down quantity.

Short-run Equilibrium under Monopoly:

Same as in the case of Monopolistic Competition.

CONCEPT REVIEW QUESTIONS

Q. 33

One of the characteristics of a monopolist is the ability to engage in price discrimination. Mention any three conditions required for price discrimination. (03)

(ICAP, CAF 02 Level-Autumn 2018)

Q. 34

State the main features of monopoly and name any one organisation which operates under monopoly. (03)

(ICAP, CAF 02 Level – Autumn 2014)

Q. 35
Explain three advantages and three disadvantages of Monopoly. **(06)**
(PIPFA – Winter 2017)

Q. 36
Explain the process of profit-maximization by a monopolist with the help of an appropriate diagram. **(08)**
(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.1)

Q. 37
Briefly describe the disadvantages of having a monopoly setup. **(08)**
(ICAP, CAF 02 Level – Spring 2009)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.11)

Q. 38
Explain six different features which distinguish a market functioning in an environment of perfect competition from a market which operates as a monopoly. **(09)**
(ICAP, CAF 02 Level – Autumn 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 5.14)

Q. 39
BCD Chemicals is a monopolist firm; it is attaining long run equilibrium. Show by diagram. **(04)**
(PIPFA-Summer 2018)

Q. 40
(a) What is 'Price discrimination'? Give two practical examples of price discrimination. **(03)**
(b) Explain with the help of diagrams how a monopolist finds it profitable to charge discriminating prices when the elasticities of demand in the two markets are different. **(09)**
(ICAP, CAF 02 Level – Autumn 2013)

LO 12: OLIGOPOLY:

Definition and Examples of Oligopoly:

Definition:

Oligopoly is a market situation in which an industry is dominated by a few large sellers (usually more than 2 but less than 20), which sell substitute goods and are interdependent on each other.

Study Tip – Duopoly
An industry in which there are only two dominant firms, is called a duopoly.

Examples:

- Airline market
- Car makers
- Mobile companies
- Oil and Gold Producers
- Accountancy profession dominated by "Big4 firms"

Features of Oligopoly:

Few Large Firms:

In oligopoly, there are few large firms with a high market share (i.e. concentration ratio).

Nature of Product:

In oligopoly, goods are close substitute. However, goods may be
- homogenous (e.g. petrol, steel, cement, Zinc, Copper) or
- differentiated (e.g. cars, cigarettes, electronic equipment).

Interdependence of Firms:
Products are substitutes with high cross elasticity of demand. Therefore, policies of every producer directly affect others e.g. if a firm reduces its price to increase his market share, rivals will also decrease prices and a Price-War may start.

Indeterminate Demand Curve:
The pattern of demand curve is not definite. Demand curve may show different behavior with different changes in price.

Barriers to Entry:
In oligopoly, large firms create high barriers to entry. Therefore, entry in the market is difficult but not impossible.

Role of Advertisement:
As goods are good substitutes of each other, oligopolists engage in advertisement and other sales promotional activities to retain and attract customers.

Lack of market information:
Consumers in such a market do not have perfect knowledge of market.

Collusive Oligopoly:
Firms in oligopoly may co-operate with each other to agree on a common pricing and output decision, or divide market among themselves. This type of oligopoly is called "Collusive Oligopoly" or "Collusion".

Pricing and Output:
Prices are higher and output is lower as compared to competitive markets.

Mergers:
Mergers of one competing firm with other to have more control on supply, are common in Oligopoly market.

<u>Advantages and Disadvantages of Oligopoly:</u>
Advantages of Oligopoly:
- Members of oligopoly may set prices through an agreement.
- As there are few firms, they can make large profits.
- Barriers to entry allow oligopolist to earn super-normal profit in the long run.
- Price comparison is easy for customers.
- Prices are stable (in collusive oligopoly).

Disadvantages of Oligopoly:
- Price setting among oligopoly firms may be at disadvantage to consumers.
- No incentive for product improvement, as firm would be already making good profits.
- There may be price war between oligopolists.
- Small players cannot enter market, so there is lack of innovation in the market.

Cartel: (or Price Cartel): *(in collusive oligopoly)*

Definition:

When oligopolies collude among themselves and make a formal or informal agreement to fix price for the market and individual share of each firm, it is called Cartel. An example of international oil cartel is OPEC (Organization of the Petroleum Exporting Countries).

Success (or failure) of Price Cartels depend on following factors:

1. **Major firms controlling market:**
   Cartel should consist of most of the producer in the market, so that they are able to control the supply and consequently price in market.

2. **No Availability of Substitute:**
   There should be no close substitute. If substitutes are available, buyers will shift to them if prices are increased.

3. **Price Elasticity of Demand:**
   Cartels are effective if demand is inelastic. If demand is inelastic, higher price may be charged which will increase total revenue. If demand is elastic, higher price will decrease total revenue.

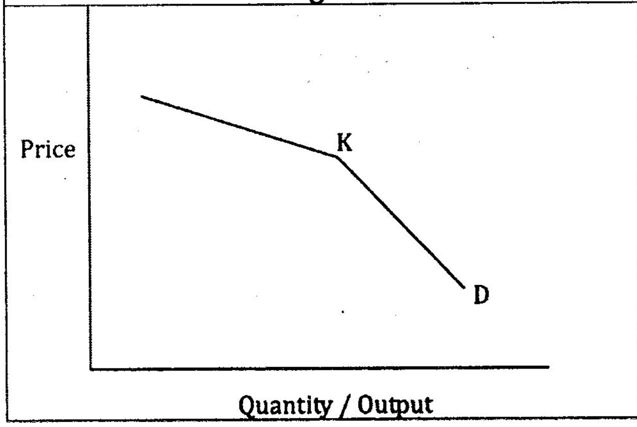
4. **Ease with which supply can be controlled:**
   Cartel is successful if supply can be easily controlled. However, if supply is dependent on weather or political conditions (e.g. agricultural products), cartel may not be successful.

5. **Agreement on individual share:**
   Cartel is successful if firms agree on their allotted quota of supply. However, if they secretly increase their supply in the market, price will decrease and cartel will collapse.

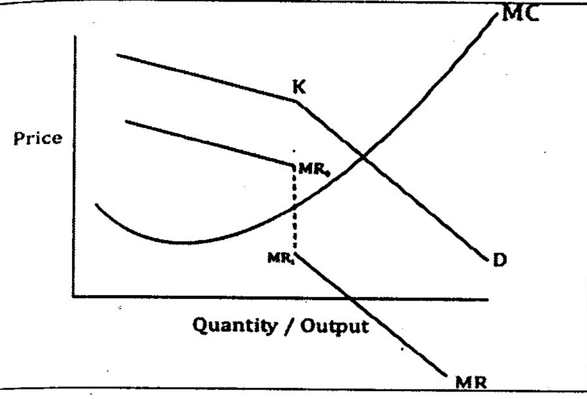
6. **Non-intervention by government.**
   Cartel is successful if government does not interfere in market. If government announces cartels to be illegal, cartels will not be successful.

Demand Curve in Oligopoly:

The **kinked demand curve** is a non-collusive oligopolist's demand curve which is downward sloping but has different segments (joined at a corner or kink) with different elasticities.

Diagram	Explanation
	**Assumptions/Explanation of the kinked demand curve:** 1. There is a prevailing price in the market. Kink in the demand curve is always at the ruling price. 2. Each seller's behavior depends on attitude of competitor. 3. If a firm increases price, other firms will not increase their prices so this firm will lose its much share of the market. Here, demand is elastic for price increase. 4. If a firm decreases price, other firms will also decrease their prices so starting Price War. Here, demand is inelastic for price decrease.

Equilibrium under Oligopoly:

Diagram	Explanation
	1. D represents Kinked demand curve of oligopoly. 2. MR represents Marginal Revenue curve of oligopoly. There is a discontinuity in the marginal revenue curve just below the point corresponding the kink. 3. Next, we draw the Marginal Cost curve. 4. Equilibrium of the firm will be at the point where MC = MR.

CONCEPT REVIEW QUESTIONS

Q. 41

What is meant by 'Oligopoly'? List any four advantages and disadvantages of Oligopolies. **(05)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 42

(a) Oligopoly is the situation where industry is dominated by a few large suppliers. Briefly discuss any six features of oligopoly. **(06)**

(b) When oligopolists fix prices by collusion among themselves, they are known as cartel. Discuss the factors that are responsible for the success / failure of price cartel. **(04)**

(ICAP, CAF 02 Level – Autumn 2015)

Q. 43

Define price cartel or price ring and collusion.

(ICAP's Official Question Bank for CAF 02 – Q. # 5.18)

Q. 44

What is kinked demand curve?

(ICAP's Official Question Bank for CAF 02 – Q. # 5.20)

Q. 45

How does oligopoly differs from monopolistic competition? **(04)**

(ICAP, CAF 02 Level – Spring 2003)

CHAPTER SIX

MACROECONOIMCS: AN INTRODUCTION

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Questio Bank Reference
LO 1	OBJECTIVES OF MACROECONOMIC POLICIES	6.1.1	9.2a, 9.5a, 9.7
LO 2	CIRCULAR FLOW OF INCOME	6.3.2, 1.3.6	6.3, 6.4a, 7.1 a&b,
PART A – NATIONAL INCOME/GDP			
LO 3	DEFINITION OF GDP, AND THREE METHODS TO CALCULATE GDP	6.3.1, 6.3.3, 6.3.4, 6.3.5, 6.3.6, 6.1.4, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 1.3.5	6.1a, 6.2, 6.1 6.12, 6.13, 6.
LO 4	MEASUREMENT BASIS OF GDP	6.2.1	N/A
LO 5	DIFFICULTIES IN MEASUREMENT AND COMPARISON OF GDP	6.1.4, 6.1.5	6.1b
PART B – NATIONAL EQUILIBRIUM/MACROECONOMIC EQUILIBRIUM			
LO 6	AGGREGATE DEMAND (AD) AND SHIFT IN AD CURVE	6.4.3	6.7
LO 7	AGGREGATE SUPPLY (AS) AND SHIFT IN AS CURVE	6.4.2	6.5, 6.6
LO 8	APPROACHES TO MACROECONOMIC EQUILIBRIUM	N/A	N/A
LO 9	AD-AS APPROACH TO MACROECONOMIC EQUILIBRIUM	6.4.4	6.8c,
LO 10	OUTPUT GAP	6.4.5, 6.4.6, 6.4.7	6.9, 6.10
LO 11	CHANGES IN MACROECONOMIC EQUILIBRIUM	6.4.4	N/A

*** October 2016 Edition*

LO 1: OBJECTIVES OF MACROECONOMIC POLICIES:

Economic Growth:

Economic growth means an increase in GDP of a nation over time. This will increase the wealth of the country and standard of living of people.

Full employment:

Government has social objective to achieve full employment level:

- to ensure maximum utilization of human resources and increase national output, and
- to reduce crimes, or social security payments as a result of unemployment.

Price Stability:

Government ensures there is no or low inflation ensuring stability in prices and exchange rates.

Equilibrium in Balance of Payment:

Through its policies, government ensures that there is a balance between its imports and its exports by restricting imports and promoting exports.

Equilibrium in Fiscal Budget:

Government ensures that there is a balance between its public expenditures and its tax revenues.

CONCEPT REVIEW QUESTION

Q. 1

In your opinion what are the three most important primary goals of a well conceived Macroeconomic policy? Briefly discuss the significance of each of these macroeconomic goals. **(06)**

(ICAP, CAF 02 Level – Spring 2010)

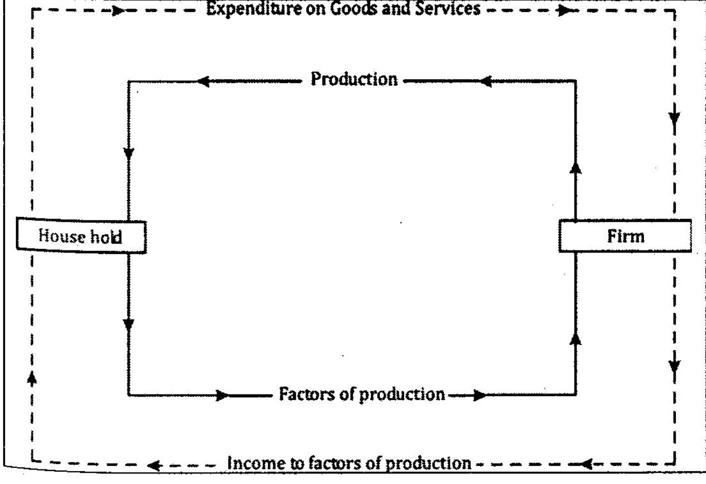
(ICAP's Official Question Bank for CAF 02 – Q. # 9.2a)

LO 2: CIRCULAR FLOW OF INCOME:

Definition of Circular Flow of (national) Income:

Circular flow of income explains how Goods and Money flow within an economy among economic agents.

Diagram of Circular flow of income: (Simple Economy or 2-Sector Economy)

Diagram	Explanation
	1. Firms engage households to provide factors of production and in return give them rent, wages etc. (which is income for households). 2. Households use this money to buy goods/services from Firms. (which is expenditure for households). 3. There are two types of flows in the diagram which move in opposite direction i.e. a. "Real Flow" which is the inner flow of factors of production and production. b. "Money flow" which is outer flow of income and expenditure.

Withdrawals and Injections in Circular Flow of Income:

Leakages/ Withdrawals: *(i.e. funds going out of the circular flow)*

1. Savings ***(S)*** i.e. Percentage of income which is not consumed by households.
2. Taxation ***(T)*** i.e. Percentage of income paid by households to government.
3. Imports ***(M)*** i.e. Payments to foreigners on purchase from abroad.

Injections: *(i.e. funds coming into the circular flow)*

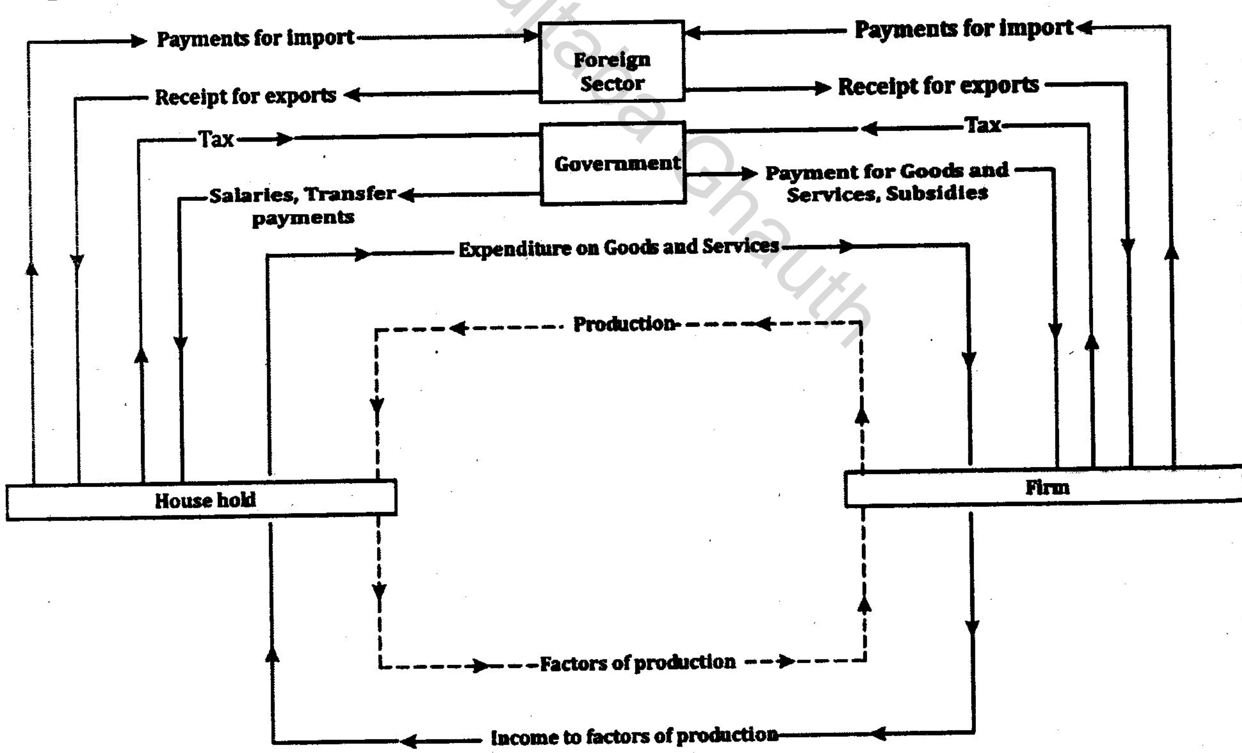
1. Investments ***(I)*** i.e. Expenditures by firms on purchase/manufacturing of capital goods.
2. Government Spending ***(G)*** i.e. Expenditures by government on consumption or investment goods.
3. Exports ***(X)*** i.e. Receipts from foreigners on sale to abroad.

Advanced concepts of Circular Flow of Income:

Circular flow of income shows various macroeconomic concepts i.e.

1. It proves that National Expenditure = National Income = National Output
2. Lord Keynes has explained that Injections will increase GDP (leading to boom/growth), Withdrawals will decrease GDP (leading to recession) and economy will be in **equilibrium if Withdrawals (S + T + M) = Injections (I + G + X).**
3. Difference between Saving and Investment is filled through Capital Market.
4. Difference between Government Expenditure and Taxation is called surplus/deficit in Fiscal Budget. In short-run, a deficit is financed by public borrowings.
5. Difference between Imports and Exports is called surplus/deficit in Balance of Payment.

Diagram of Circular flow of income: (Open Economy or 4-Sector Economy)



CONCEPT REVIEW QUESTION

Q. 2
(a) Draw a Diagram of Circular Flow of Income. **(04)**
(b) Identify and explain briefly the three different types of Withdrawals and Injections from the Circular Flow of Income. **(06)**
(ICAP, CAF 02 Level – Autumn 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 6.3)

Q. 3
Country ABC consists of four sectors; Households, Firms, Government and Foreign Traders. Briefly explain the **Injections** and **Withdrawals** associated with circular flow of National Income of this economy. **(06)**
(PIPFA-Summer 2018)

Q. 4
What happens to the size of the circular flow when leakages exceed injections? **(02)**
(Institute of Chartered Accountants in Malawi – June 2014)

PART A – NATIONAL INCOME/GDP

LO 3: DEFINITION OF GDP, AND THREE METHODS TO CALCULATE GDP:

Gross Domestic Product (GDP) or National Income:

"GDP is the aggregate market value of all final goods and services produced within boundaries of a country in a given period."

There are three methods to calculate GDP i.e. Expenditure method, Income method and Product/Output method.

Expenditure Method:

Under Expenditure method, an economy is divided into four sectors; and then spending by all sectors during the year is added i.e.

$$GDP = C + I + G + (X - M)$$

Format under Expenditure Method:

Category of Expenditure	Amount
Private/Domestic Consumption (C):	
Gross Private Investment/ Capital Formation (I): *(Increase in inventory is also added here)*	
Government Spending (G):	
Net Exports (X – M):	
C + I + G + X-M = Gross Domestic Product (at Market Price) *	-
Add: Net Property Income from abroad/Foreign Factor Income (i.e. Income of Citizens from abroad – Income of Foreigners in country)	
= Gross National Product (at Market Price) *	-
Less: Capital Consumption *(this is the depreciation on capital stock of nation)*	
= Net National Product = National Income (at Market Price)*	-
Less: Net indirect Taxes (i.e. Indirect Taxes - Subsidies)	
= National Income (at Factor Cost)	-

**National Income at market price means National Income before deduction of "net indirect taxes". National Income at factor cost means National Income after deduction of "net indirect taxes".*

Study Tips – Other variants of National Income

1. Gross National Product is the aggregate market value of all final goods and services produced by citizens of a country in a given period.
2. "Gross" means before depreciation and "Net" means after deductions of depreciation e.g.
   Net Domestic Product = Gross Domestic Product – Depreciation
   Net National Product = Gross National Product – Depreciation
3. Personal income is the aggregate of income received by individuals i.e.
   Personal Income = National Income – Corporate tax – Retained Earnings – Transfer Payments
4. Personal income – Personal tax = Disposable personal income

Difficulties/Precautions associated with Expenditure Method:

- An item is included only when it is sold in market. Non-market transactions are not included in national income e.g. Do-it-yourself activities, Work of house-wives, Eatables grown and used at home, Barter transactions.
- Adjustment should be made for Depreciation and Indirect taxes to arrive at true figure of national income.

Income Method:

Under this method, an economy is divided into four factors of production; and then income of all factors is added i.e.

National Income = Rent + Wages + Interest + Profit

Format under Income Method:

Category of Income	Amount
Rent:	-
Wages before tax:	-
Interest:	-
Profits before tax:*	-
National Income (at Factor Cost)	-

* *In a numerical question, you may have to calculate it by adding Dividend, Undistributed Profit, and Tax.*

Difficulties/Precautions associated with Income Method:

Following items are not included in calculation under Income Method:

- Transfer Payments.
- Increase in **value** of assets, because this is due to inflation and not due to increase in quantity of output.
- Non-Productive Transactions (e.g. 2nd hand sale of goods, securities bought or sold)

Following incomes are earned but not declared to authorities (called Black or shadow economy):

- unreported income to avoid tax,
- income earned from illegal sources (drugs, gambling, bribe, immoral activities)

Further, an adjustment will have to be made if there is any undistributed profit.

Study Tips – Transfer Payment

Transfer payment is a one-way payment of money in which there is no exchange of goods or services in current period. These could be either:

- Govt. Transfer Payment i.e. govt. to individual (e.g. Pensions, Social security benefits) or
- Private Transfer Payment i.e. individual to individual (e.g. Gifts, Charity).

Product/Output approach: *(or Value-added approach)*

Under this method, an economy is divided into different sectors of production; and then net value of all final goods and services produced during the year are added i.e.

National Income = Value of Final goods/services – Value of Intermediate goods/services (all sectors)

Format under Output Method:

Stage of Production	Market Value of Intermediate Goods (i.e. Input)	Market Value of Final Goods (i.e. Output)	Value Added
Raw Material	0	15	15
Manufacturing	15	50	35
Retail	50	90	40
National Income (i.e. Sum of Value Added)			90

Difficulties/Precautions associated with Output Method:

There is a risk of double counting, because outputs of some firms become inputs of others. To avoid double counting, only value added at each stage of production is added.

Study Tip – Intermediate Goods

Intermediate goods are goods which are used as inputs to produce other goods e.g. Steel/tyres/leather used in a Car.

CONCEPT REVIEW QUESTION

Q. 5 **(04)**
Define GDP (Gross Domestic Product) and GNP (Gross National Product).
(PIPFA – Winter 2016)

Q. 6
Briefly describe GDP at market price and GDP at factor cost.
(ICAP, CAF 02 Level – Autumn 2012)

Q. 7
Define the term National Income and list the components of National Income under the Income Method. **(03)**
(ICAP, CAF 02 Level – Spring 2010)

Q. 8 **(09)**
Briefly describe three different approaches of measuring National Income.
(ICAP, CAF 02 Level – Autumn 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 6.1a)

Q. 9
State four types of difficulties which are usually associated with the measurement of national income. **(03)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 10
(a) Explain the income, output and expenditure methods of measuring national income.
(b) Describe some of the difficulties involved in their calculation.
(ICAP's Official Question Bank for CAF 02 – Q. # 6.2)

Q. 11

Explain the product or value added method to measure national income. **(08)**

(PIPFA – Summer 2017)

Q. 12

State the reason for excluding intermediate goods from the calculations of GDP. **(04)**

(ICAP, CAF 02 Level – Autumn 2009)

Q. 13

'Income method measures the national income after it has been distributed and appears as income earned or received by individuals of the country'.

List the items which are excluded from the computation of national income under the income method. **(03)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 14

Briefly explain "Transfer Payments" **(02)**

(ICAP, CAF 02 Level – Spring 2010)

Q. 15

Following data relates to the economy of a country over a year period.

	Rs. In Millions
Capital consumption	2,625
Subsidies	450
Exports	9,675
Imports	9,360
Consumers' expenditure	27,600
Taxes on expenditure	4,140
Net property income from abroad	315
Value of physical decrease in stocks	30
Gross domestic fixed capital formation	7,380
General government final consumption	6,810

Required:

You are required to compute the following, showing necessary workings:

a. Gross Domestic Product (GDP) at market prices and at factor cost **(06)**

b. Gross National Product (GNP) at market prices and at factor cost **(06)**

c. National Income at factor cost **(03)**

(ICAP, CAF 02 Level – Spring 2002)

Check Figures: National Income (at Factor Cost) = 36,075 & GDP at factor cost = 38,385 & GNP at factor cost = 38,700

Q. 16

The Economic Survey of the government of Aladina discloses the following:

	Rupees in millions
Government expenditure	7,500
Sales value of output of firms	30,000
Imports	6,000
Profit before tax of firms	10,500
Consumers' expenditure	16,500
Wages etc. received by employees	12,000
Tax deducted out of wages	1,500
Exports	6,000
Cost of goods and services purchased from outside firms	6,000

You are required to compute the Gross Domestic Product (GDP) by:

i) Expenditure approach **(05)**

ii) Income approach **(05)**

iii) Value added approach **(05)**

(ICAP, CAF 02 Level – Spring 2001)

Check Figures: GDP = Rs. 24,000

LO 4: MEASUREMENT BASIS OF GDP:

GDP Per-capita:

GDP per-capita means average GDP of a country per person i.e.

GDP per capita = GDP / Population

GDP per capita is an indicator of a country's standard of living.

Nominal GDP and Real GDP:

Nominal GDP means measurements of GDP at current market prices (i.e. without adjustment for inflation).

Real GDP means measurement of GDP at base/constant market prices (i.e. after adjustment for inflation).

Real GDP= Nominal GDP / GDP Deflator *(where GDP Deflator = 1 + Inflation Rate)*

Real GDP is considered more accurate indicator of economic growth.

Exam Tip

Theoretically GDP and National Income are same; however in calculation, both are different.

CONCEPT REVIEW QUESTION

Q. 17

Differentiate Nominal and Real GDP (Gross Domestic Product). **(04)**

(PIPFA – Winter 2017)

LO 5: DIFFICULTIES IN MEASUREMENT AND COMPARISON OF GDP:

Difficulties in measuring/calculating National Income:

1. **Decisions to make before measurement of national income:**
   Country has to decide which method of measurement to use.

2. **Lack of trained staff:**
   Collection, compilation and analysis of statistical data is highly technical exercise and it is difficult to arrange sufficiently trained staff for it.

3. **Illiteracy/unreliable record keeping:**
   No systematic accounts are maintained by producers.

4. **Some income cannot be captured:** e.g.
   a. Underground (or Black/Shadow) Economy Transactions.
   b. Non-market transactions

5. **Some items may be wrongly included in national income: e.g.**
   a. Risk of double counting.
   b. Transfer Payments.

6. **Complexities in calculation of national income:**
    a. Complications in treatment of income of multinational firms.
    b. Calculation of depreciation, valuation of inventories is a difficult and subjective procedure.

Difficulties in making comparisons:

Difficulties in making single country comparisons:

- Increase in national income may be due to Inflation, and not due to economic growth.
- GDP per capita overlooks unequal distribution of wealth.
- GDP focuses on material wealth. It does not cover social aspects e.g. quality of life, happiness of society, and pollution, crimes etc.

Difficulties in making international comparisons:

1. Exchange rate distorts comparability of figures.
2. Choice of method may affect result of process.
3. There may be difference in countries regarding classification of activities.
4. Some countries focus more on consumer goods, and some on capital goods. Their GDP will be same, however, standard of living will be different.

CONCEPT REVIEW QUESTION

Q. 18

What difficulties are usually faced in measuring National Income? **(09)**

(ICAP, CAF 02 Level - Autumn 2008)

(ICAP's Official Question Bank for CAF 02 – Q. # 6.1b)

PART B – NATIONAL EQUILIBRIUM/MACROECONOMIC EQUILIBRIUM

LO 6: AGGREGATE DEMAND (AD) AND SHIFT IN AD CURVE:

Aggregate Demand (AD):

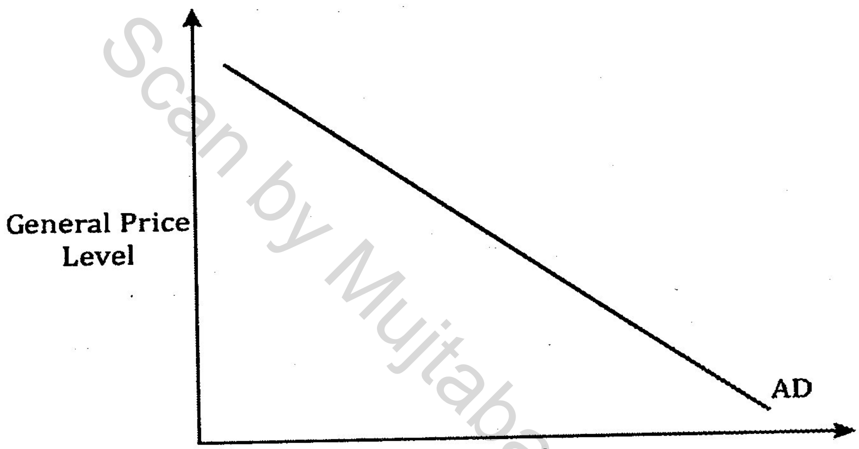
Aggregate Demand is the quantity of all goods and services in an economy which buyers are willing and able to buy at different price levels.

AD has four components i.e.

Aggregate Demand (AD) = Consumption (C) + Investment (I) + Govt. Spending (G) + Net Exports (X – M)

Aggregate Demand Curve (AD Curve):

Aggregate Demand Curve shows how much GDP will be demanded at each general price level.



AD curve is downward sloping as quantities demanded will increase when the price falls.

Components of Aggregate Demand:

- Private Consumption (C)
- Gross Private Investment (I)
- Government Spending (G)
- Net Exports (X – M)

AD Curve can shift rightward or leftward if there is change in any of the above components e.g. if government increases its expenditures on infrastructure, AD will shift rightward.

CONCEPT REVIEW QUESTION

Q. 19

(a) Define the term aggregate demand. **(02)**

(b) Write and explain an equation that represents the components of an aggregate demand. **(05)**

(Institute of Chartered Accountants in Malawi – December 2012)

Q. 20

List any three factors that may cause a shift in aggregate demand curve **(1.5)**

(ICAP, CAF 02 Level-Autumn 2018)

Q. 21

What are the 4 components of aggregate demand (AD), and what is the equation?

(ICAP's Official Question Bank for CAF 02 – Q. # 6.7 a)

LO 7: AGGREGATE SUPPLY (AS) AND SHIFT IN AS CURVE:

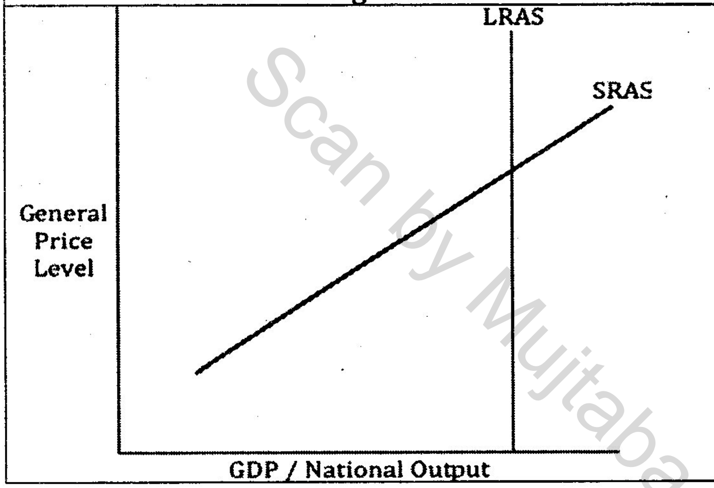
Aggregate Supply (AS):

Aggregate Supply is the quantity of all goods and services in an economy which suppliers are willing and able to supply at different price levels.

Aggregate Supply Curve (AS Curve):

Aggregate Supply Curve shows how much goods and services will be supplied at each general price level.

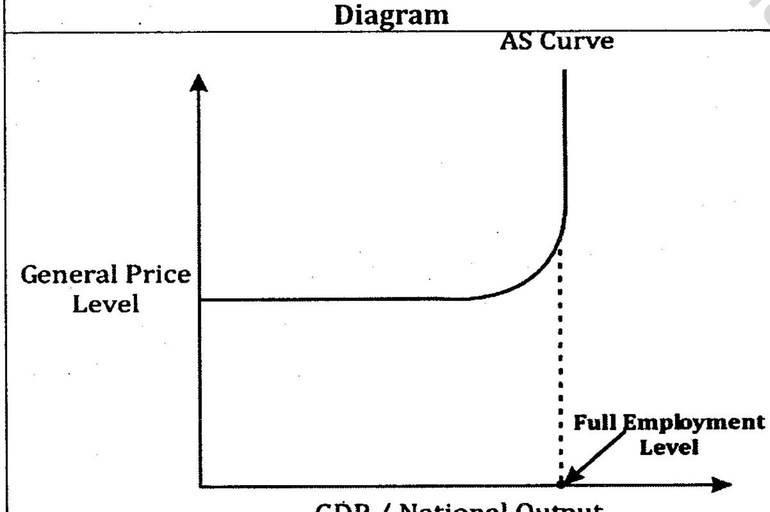
Diagram of AS Curve: *(Classical or Neo-classical Approach)*

<table>
<tr><th>Diagram</th><th>Explanation</th></tr>
<tr><td>
</td><td>According to classical economists, there is difference between short-run aggregate supply curve (SRAS) and long-run aggregate supply curve (LRAS).

In the short-run, if prices are increased, aggregate supply is also increased and slope of SRAS is upward like regular supply curve.

In the long-run, aggregate supply is assumed to be independent of price, and is therefore vertical. LRAS represents "Potential Output" or "Productive Potential" or "Full employment level". It is that level of output which can be achieved if all factors of production of an economy are fully utilized.</td></tr>
</table>

Diagram of AS Curve: *(Keynesian Approach)*

<table>
<tr><th>Diagram</th><th>Explanation</th></tr>
<tr><td>
</td><td>According to Keynesian economists, there is no difference between short-run and long run.

If economy is not at full employment level, AS curve will be flat because resources are not fully utilized. As output increases, economy will use spare capacity and price level will not go up.

If economy is at full employment level, AS curve will be vertical because it will not be possible to increase output beyond full employment level.</td></tr>
</table>

Determinants of AS:

Aggregate Supply depends on Factors of Production and Production Costs.

Factors of Production:

- Changes in Natural resources (e.g. Oil, Gas, Coal, Other mineral resources)
- Quantity, Quality and Productivity of Labor
- Quantity, Quality and Productivity of Capital
- Availability of Entrepreneurship and Technology.

Production Cost:

- Change in cost of inputs (e.g. . raw material, wage rates, overheads).
- Change in taxes or subsidies on producers.
- Change in import prices or exchange rates

If changes in these determinants are temporary, SRAS will change. If changes are permanent, LRAS will change.

CONCEPT REVIEW QUESTION

Q. 22

(a) With the aid of a diagram, define and explain the terms "aggregate demand" and "aggregate supply". **(06)**

(b) Name two factors which influence aggregate demand and two factors which influence aggregate supply. **(02)**

(Institute of Chartered Accountants in Malawi – December 2013)

Q. 23

List any three factors that may cause a shift in short-run aggregate supply curve **(1.5)**

(ICAP, CAF 02 Level-Autumn 2018)

Q. 24

(a) The neo-classical branch of economists believe that there is a short run aggregate supply curve (SRAS) and a long run aggregate supply curve (LRAS). Draw a SRAS curve.

(b) Draw a shift in the supply curve as a result of a decrease in the cost of labour throughout an economy.

(c) What are 6 reasons for a backward shift in a SRAS?

(ICAP's Official Question Bank for CAF 02 – Q. # 6.5)

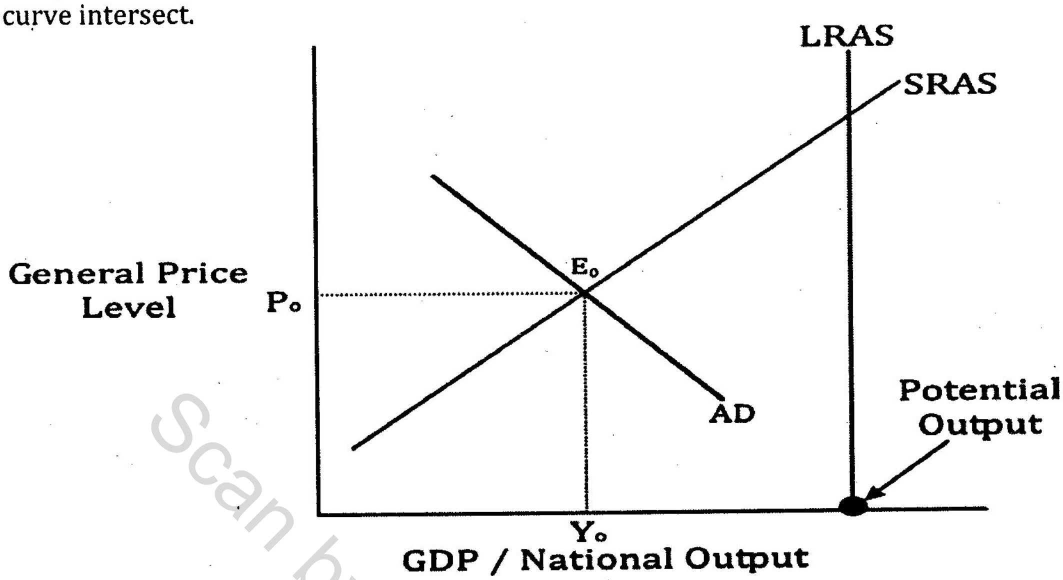
LO 8: APPROACHES TO MACROECONOMIC EQUILIBRIUM:

There are three approaches to determine macroeconomic equilibrium (i.e. equilibrium level of output):

1. AD-AS Approach (or Aggregate Demand = Aggregate Supply Approach)
2. Total Expenditure Approach (or Expenditure = Income Approach)
3. Saving-Investment Approach (or Withdrawals = Injection Approach)

LO 9: AD–AS APPROACH TO MACROECONOMIC EQUILIBRIUM:

A national economy will reach equilibrium where the aggregate demand curve and aggregate supply curve intersect.



SRAS represents what is actually produced/supplied in the economy. LRAS represents productive potential in the economy. Therefore, Economy is in equilibrium at the point where AD is equal to SRAS, and NOT where AD is equal to LRAS.

Terms "GDP" and "National Income" and "National Outputs" are synonymously used in macroeconomic equilibrium.

Study Tip – Effective Demand

According to Keynes, effective demand is that value of Aggregate Demand where it equals Aggregate Supply. This means that actual expenditure in an economy is based on actual income of consumers, and NOT based on full employment level.

CONCEPT REVIEW QUESTION

Q. 25

Explain with the help of a diagram, the equilibrium of aggregate supply (AS) and aggregate demand (AD) under neo-classical approach. **(07)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 26

Define what Keynes meant by "effective demand".

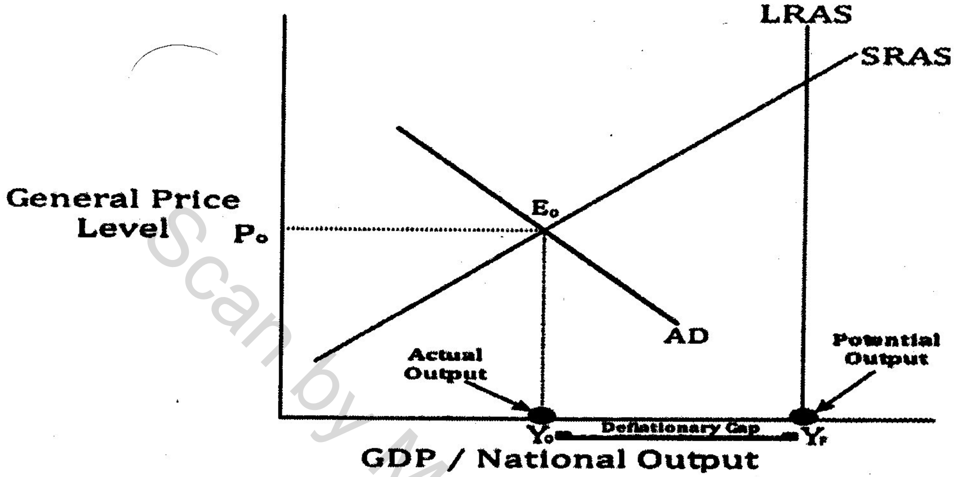
(ICAP's Official Question Bank for CAF 02 – Q. # 6.7c)

LO 10: OUTPUT GAP:

The difference between Actual Output and Potential Output is called Output Gap.

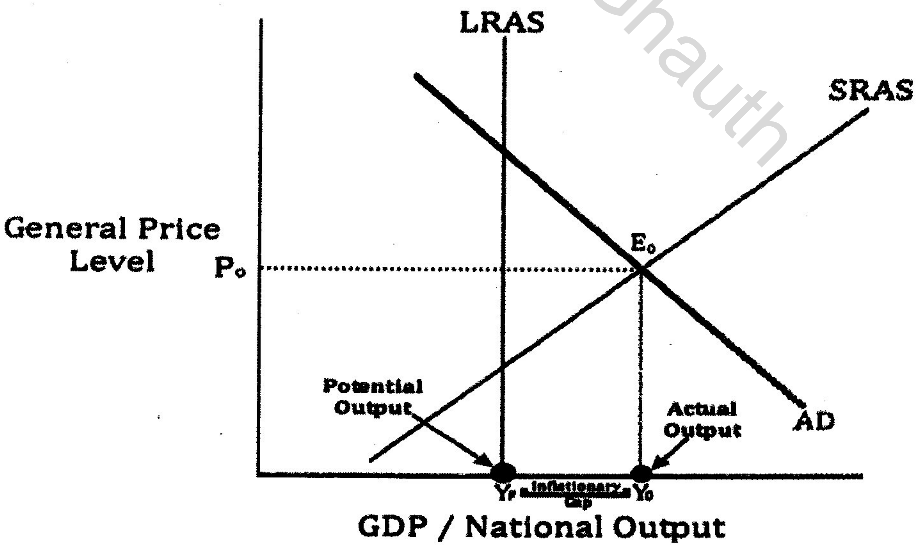
- If actual output is less than potential output, it is called Deflationary/ Recessionary/ Negative Output Gap.
- If actual output is more than potential output, it is called Inflationary/ Positive Output Gap.
- If actual output is equal to potential output, it is called Ideal equilibrium.

Deflationary Gap:



Explanation:
Actual level of national income (or output) is the point of intersection of SRAS and AD i.e. at i.e. at Y_e. Y_f is the national income (or output) at full employment. Actual output is less than potential output which is represented in diagram by distance between Y_e and Y_f. This is called deflationary gap. To remove deflationary gap, Government may use Expansionary policies.

Inflationary Gap:



Explanation:
Actual level of national income (or output) is the point of intersection of SRAS and AD i.e. at i.e. at Y_e. Y_f is the national income (or output) at full employment. Actual output is more than potential output which is represented in diagram by distance between Y_e and Y_f. This is called inflationary gap. This gap is possible by using factors of production in excess of their normal capacity. But it is not sustainable in long-run. To remove inflationary gap, Government may use Contractionary policies.

CONCEPT REVIEW QUESTION

Q. 27
Explain the concept of Inflationary Gap in an economy. Illustrate your answer with the help of a diagram. (0
(ICAP, CAF 02 Level – Spring 201

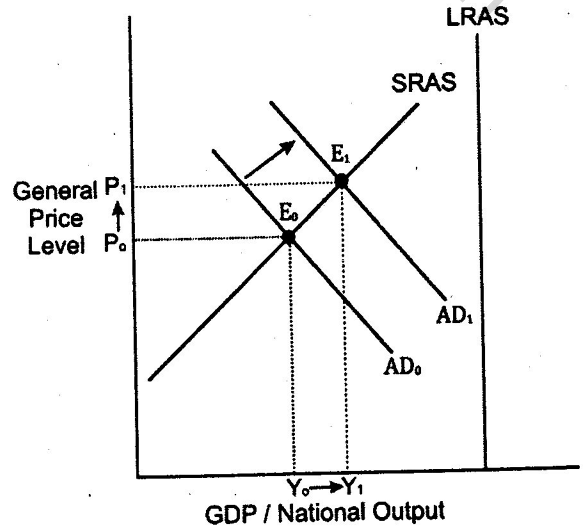
Q. 28
(a) Define an output gap. What are positive and negative output gaps known as?
(b) Draw a positive output gap on a graph.
(c) Explain how a positive gap is possible within an economy.
(ICAP's Official Question Bank for CAF 02 – Q. # 6

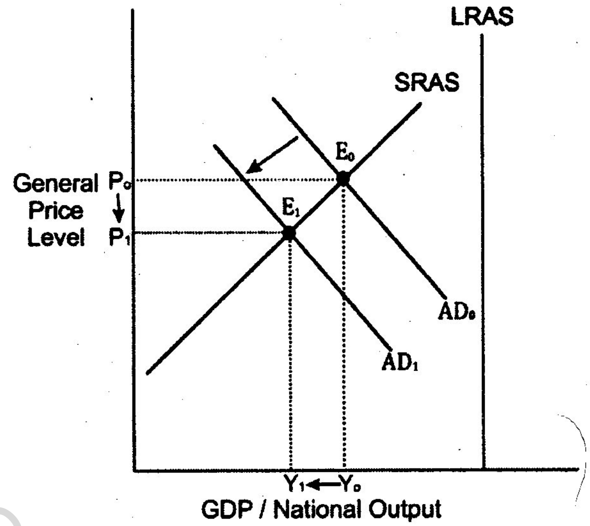
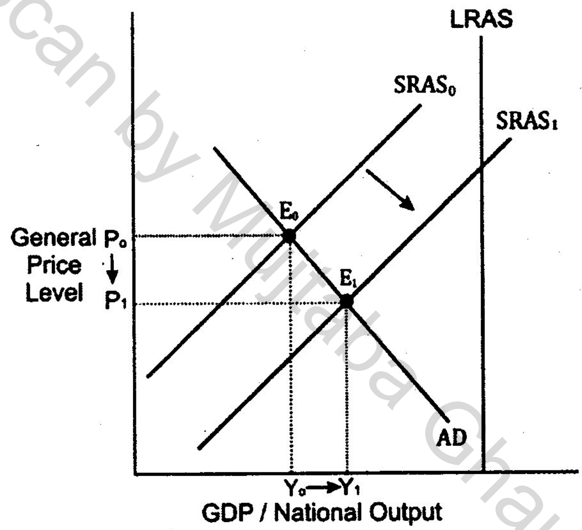
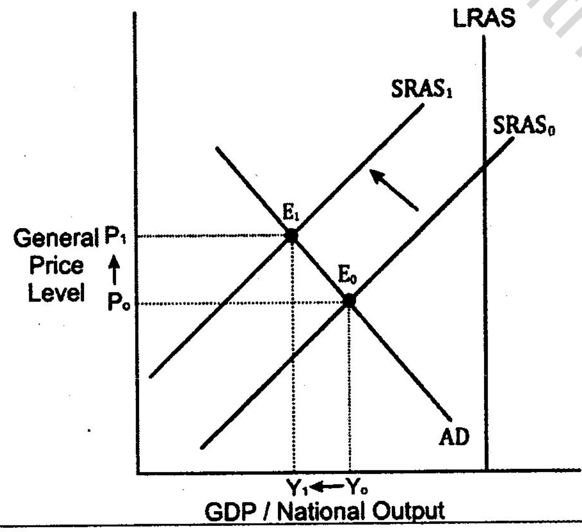
Q. 29
Illustrate with the help of a diagram, the concept of deflationary gap in the economy. (0
(ICAP, CAF 02 Level – Spring 20
(ICAP's Official Question Bank for CAF 02 – Q. # 6.

LO 11: CHANGES IN MACROECONOMIC EQUILIBRIUM:

Reason of change in market equilibrium:
Equilibrium point changes when there is a change in non-price determinants of demand or sup (i.e. there is shift in demand curve or supply curve).

Effect of change in market equilibrium:
Change in market equilibrium affects equilibrium Price and equilibrium Quantity.

Situation	Graphical Presentation	Effect o Equilibri
Rightward shift in Aggregate Demand Curve: (i.e. increase in Aggregate demand due to expansionary fiscal and monetary policies)		GDP → Price Leve

<u>Leftward shift in Aggregate Demand Curve:</u> (i.e. decrease in Aggregate demand due to contractionary fiscal and monetary policies)		GDP → Down Price Level → Down
<u>Rightward shift in Aggregate Supply Curve:</u> (i.e. increase in aggregate supply due to increase in factors of production or decrease in production cost)		GDP → Up Price Level → Down
<u>Leftward shift in Aggregate Supply Curve:</u> (i.e. decrease in aggregate supply due to decrease in factors of production or increase in production cost)		GDP → Down Price Level → Up

CHAPTER SEVEN

CONSUMPTION, SAVING AND INVESTMENT

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
LO 1	CONSUMPTION AND ITS DETERMINANTS	7.1.1, 7.1.3,	N/A
LO 2	KEYNES' LAW OF CONSUMPTION	7.1.2, 7.1.4, 7.1.5, 7.1.6	7.3
LO 3	SAVING AND ITS DETERMINANTS	7.1.1, 7.1.7	N/A
LO 4	INVESTMENT, ITS TYPES AND DETERMINANTS	7.2.1, 7.2.2, 7.2.3, 7.2.4,	7.2
LO 5	GOVERNMENT POLICIES TO INFLUENCE LEVEL OF INVESTMENT IN A COUNTRY	7.2.5	7.4
LO 6	IMPACT OF CHANGE IN INTEREST RATE AND SAVING RATE	7.2.6	6.4b, 7.1c, 12.4

*** October 2016 Edition*

LO 1: CONSUMPTION AND ITS DETERMINANTS:

Definition of Consumption:

Consumption is that part of disposable income which is spend by households on purchase of consumer goods and services.

Determinants of Consumption:

Disposable income:

Primary determinant of the consumption is disposable income of consumer. If income increases, consumption also increases.

Distribution of Income and Wealth:

A more equal distribution of income (e.g. through tax and subsidies) will shift the consumption function upward.

Expectations about price changes:

If prices are expected to increase, households will increase their consumption in current period.

Changes in Interest rates and credit availability:

Consumers finance expensive goods (e.g. house, cars) by borrowings. If interest rates decrease and credit is offered, consumptions will increase.

Changes in tax rates:

If tax rates decrease, this will cause increase in disposable income of consumer leading to increased consumption.

Money Supply:

If there in increase in supply of money, consumption will increase.

CONCEPT REVIEW QUESTION

Q. 1

Briefly describe any four objective factors which influence the consumption function in an economy. **(06)**

(ICAP, CAF 02 Level – Spring 2018)

Q. 2

Draw a shift in the AD curve as a result of consumers having less disposable income. Give two other examples that could cause this shift.

(ICAP's Official Question Bank for CAF 02 – Q. # 6.7b)

LO 2: KEYNES' LAW OF CONSUMPTION:

Keynes' Law of Consumption:

Following are three related proposition of Keynes' law of consumption:

1. Increase in income will lead to increase in consumption and saving.
2. When income of consumers increases, consumption increases; but increase in consumption is less than increase in income. (i.e. MPC < 1)
3. What is not consumed, is saved. (i.e. MPC + MPS = 1)

Consumption Function and its Table:

Consumption Function is the mathematical presentation of Keynes' Law of Consumption i.e.

$$C = a + bY$$

Where:

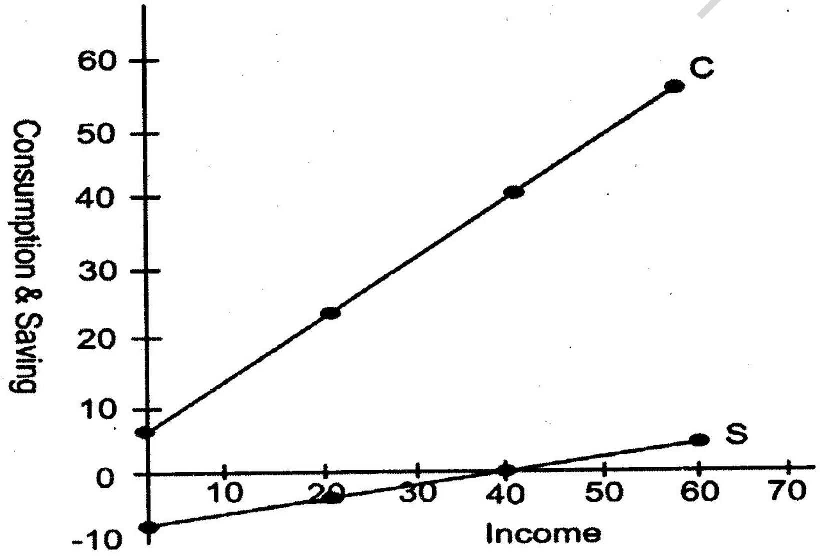
- "C" represents total consumption by consumer. It has two parts i.e.
  - Autonomous Consumption (part of consumption which does not change with income. It is incurred even if income is Zero).
  - Induced Consumption (consumption which changes with the change in income).
- "b" represents Marginal Propensity to Consume
- "Y" represents disposable income of consumer.

Income	Consumption	Saving	MPC	MPS
(Y)	(C)		(b)	
0	8	-8	-	-
10	16	-6	0.8	0.2
20	24	-4	0.8	0.2
30	32	-2	0.8	0.2
40	40	0	0.8	0.2
50	48	2	0.8	0.2
60	56	4	0.8	0.2

Notes:

1. MPC is the ratio of change in consumption to change in Income i.e. (MPC $= \frac{\Delta C}{\Delta Y}$).
2. MPC + MPS = 1
3. APC $= \frac{C}{Y}$.
4. MPC remains stable over time i.e. it does not change with change in income. APC will remain stable in short-run, but will decrease in long-run as income of household increases.

Graphs of Consumption AND Saving:



Explanation:

1. C is the consumption curve which rises with increase in disposable income.
2. Consumption curve can shift upward or downward if there is change in determinants, other than disposable income.
3. Further, slope (or gradient) of the consumption curve is the MPC. If MPC is low, consumption curve will be flatter. If MPC is high, consumption curve will be steeper. If MPC is 100%, consumption curve will represent 45° line.

Saving Curve:

S is the saving function which is derived by subtracting consumption from income.

Equilibrium:

Note that the break-even point is at the income level of Rs. 40 where income = expenditure (and saving is zero).

CONCEPT REVIEW QUESTION

Q. 3

Briefly describe the concepts of 'Autonomous and Induced consumption'. **(03)**

(ICAP, CAF 02 Level – Autumn 2017)

Q. 4

Define 'Average propensity to consume' and 'Marginal propensity to consume'. How are these calculated? **(04)**

(ICAP, CAF 02 Level- Spring 2019)

Q. 5

Define the term Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS). **(04)**

(PIPFA – Summer 2016)

Q. 6

State Keynes' Psychological Law of Consumption and the allied propositions. **(04)**

(ICAP, CAF 02 Level – Spring 2018)

Q. 7

(a) Briefly explain the relationship between consumption, income and savings.
(b) How does an increase of income affect the level of consumption in an economy? How does Keynes explain the difference based on household income, and what are the implications of this?
(c) How stable is the consumption function?

(ICAP's Official Question Bank for CAF 02 – Q. # 7.3)

LO 3: SAVING AND ITS DETERMINANTS:

Definition of Saving:

Saving is that part of income which is not consumed i.e.

Saving = Income – Consumption

Determinants of Saving:

Level of Income:

If income increases, saving also increases.

Wealth:

If there is an increase in wealth, consumer will save less out of income.

Interest Rate:

If there is an increase in interest rate, saving will also increase.

Institutional Factors:
Political stability, security of property, established banking and other financial institutions encourage people to save more. However, high indirect taxes will cause less saving because people have to spend more to maintain living standard.

Motivations for saving:
There are multiple factors that motivate individuals and firms to save more e.g. to provide for future needs, to undertake new business projects, to build reserve against unforeseen circumstances.

CONCEPT REVIEW QUESTION

Q. 8
State the determinants of saving.
(04)
PIPFA-Summer 2018)

Q. 9
Explain the concept of 'Marginal propensity to save' and how it is calculated. Also explain any four determinants of savings.
(07)
(ICAP, CAF 02 Level – Autumn 2017)

LO 4: INVESTMENT, ITS TYPES AND DETERMINANTS:

Definition of Investment:
Investment means purchase of goods by producers which will be used in future to produce more goods and services.

Types of Investment:

Autonomous Investment:
Investment which does not change with National Income/GDP is called as Autonomous Investment. These investments are made for the well-being of society and not for making profits.

Examples of autonomous investment include:

- Construction of highways and transportation facilities
- Construction of dams, hospitals, schools etc.

Induced Investment:
Investment which changes with the changes in National Income (because business reinvest their incomes), is called Induced or Private Investment. These investments are made for making profits.

Examples of induced investment include:

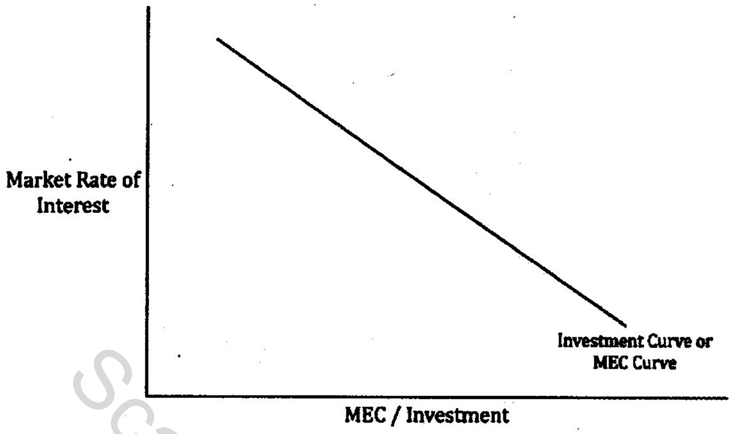
- Constructing of a new warehouse by a company.
- Purchase of a new machinery by company to expand its production

Primary Determinants of Investment:

"Rate of Interest" and "Marginal Efficiency of Capital (MEC)":

According to Keynes, primary determinants of investment are Rate of interest in market and MEC.

- If rate of interest increases, MEC decreases and investment will also decrease.
- If rate of interest decreases, MEC increases and investment will also increase.



Market Rate of Interest and Marginal Efficiency of Capital

Market Rate of Interest is the rate which individuals and firms pay for borrowing funds.

Marginal Efficiency of Capital (MEC) is the rate of discount which makes present value of returns expected from capital asset equal to its supply price (i.e. cost).

Other Determinants of Investment:

Investment demand curve (or MEC Curve) will shift rightward or leftward if any of following determinants change:

Short-run Factors:

- **Demand for the good**
  A higher demand for a good will stimulate investment.
- **Change in profit of firms**
  If profit of firms increases (e.g. through a reduction in direct tax), investment will also increase.
- **Liquid assets**
  If firms hold more liquid assets, more investment can be made.
- **Current rate of investment**
  If there are already enough investments in an industry, then MEC will be low and investment in that industry will be low.
- **Change in sentiment**
  If businessmen are optimist over future economics growth, there will be increase in investment.

Long-run Factors:

- **Population growth**
  Higher population will cause increase in demand which will further stimulate investment.

- **Technological development**
  Technological development will encourage investment. Further, increase in investment in one industry (e.g. automobile) will also cause increase in investment in related industries (e.g. steel, rubber).

- **Quantity of capital goods already in existence**
  There will be no incentive to invest in an industry where there is already enough capital goods. MEC and investment in such an industry will be low.

- **Tax rates**
  Taxes reduce profitability of investment. Therefore, if tax rates are increased MEC and investment will decrease.

CONCEPT REVIEW QUESTION

Q. 10
Differentiate between "Autonomous" and "Induced" investments. Give any two examples of each. **(04)**
(ICAP, CAF 02 Level – Spring 2015)

Q. 11
Briefly describe 'Autonomous investment and Induced investment'. Who may undertake such investments? In respect of each of the above types of investment, draw investment curve and give two examples. **(06)**
(Note: Explanation of the curves is not required)
(ICAP, CAF 02 Level- Spring 2019)

Q. 12
Explain the concept of 'Marginal Efficiency of Capital'. **(05)**
(ICAP, CAF 02 Level – Spring 08)

Q. 13
What do you understand by 'Marginal efficiency of capital (MEC)'? Explain the relationship between rate of interest and the level of investment with reference to MEC with the help of a diagram. **(08)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 14
The MEC curve shifts outwards when expected rate of return increases. Briefly discuss any three other factors that might cause an outward shift in MEC curve. **(03)**
(ICAP, CAF 02 Level – Autumn 2015)

Q. 15
(a) Explain (with a diagram) how a fall in interest rates will affect the level of investment.
(b) How might the motives for an investment by a government and a private sector firm differ? And give examples of the projects that they might undertake.
(c) Complete the following sentence: if the ____ generated from investment is greater than the ____, then profit maximising firms will invest.
(d) What might cause a shift in the Marginal Efficiency of Capital curve?
(ICAP's Official Question Bank for CAF 02 – Q. # 7.2)

LO 5: GOVERNMENT POLICIES TO INFLUENCE LEVEL OF INVESTMENT IN A COUNTRY:

Government can influence level of private investment in following ways:

Influencing Interest Rate:
If government decreases interest rate, it will cause increase in investment (and vice-versa).

Influencing Consumption:
Government can increase investment by increasing consumption e.g. if money supply is increased, consumption will increase and investment will also increase.

Government Spending:
If government makes expenditure on infrastructure (e.g. on roads, power projects), it will stimulate investment in private sector.

Encouraging Technological Development:
As technological developments cause increase in investment, government can support technological developments by financing research projects or making investment in technical education.

Stimulating Business Confidence:
Consistency in economic policies with political stability results in high business confidence which, in turns, cause increase in investment.

Encouraging Investing Firms:
Government can offer grants to firms for investing in particular regions. These grants can also be in form of subsidies or reduction in tax.

CONCEPT REVIEW QUESTION

Q. 16
Suppose Govt. of Pakistan aims to increase the private investment in the country. Write down at least four suggestions for Government to stimulate investment. **(07)**
(PIPFA – Winter 2015)

Q. 17
State briefly how a government can influence the level of private investment in the country. **(10)**
(ICAP, CAF 02 Level– Spring 2012)
(ICAP's Official Question Bank for CAF 02 – Q. # 7.4)

LO 6: IMPACT OF CHANGE IN INTEREST RATE AND SAVING RATE:

Impact of Change in Interest Rate:
Decrease in interest rate affects economy in following ways:

1. Savings will be decreased and borrowings will be increased.
2. Consumption and investment in the economy will be increased.
3. Disposable income of households (with loans and mortgages) will increase.
4. There will be outflow of funds to other countries (with higher interest rates). Outflow of dollar will depreciate Pak Rupee (or exchange rate).
5. Fiscal deficit of government will decrease as it will have to pay less interest.

Study Tip
Increase in interest rate will affect opposite.

Impact of Change in Saving Rate:

Increase in saving rate affects economy in following ways:

1. Consumption will decrease (due to interdependence of saving and consumption) and demand for products will also decrease.
2. Interest rate will decrease (as demand for money in economy has decreased).
3. Decreased cost of borrowings for firms should promote investment. However, as economy is already facing decrease in demand and consumption, investment will increase only in certain industries e.g. industries providing essential goods whose demand cannot be postponed.

Study Tip
Decrease in saving rate will affect opposite.

CONCEPT REVIEW QUESTION

Q. 18
Explain the impact of decrease in interest rates on firms and individuals. **(02)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 19
Briefly explain the effect of change in rate of interest on consumption and saving. **(04)**
(PIPFA – Winter 2017)

Q. 20
How might the business sector be affected if there were a rise in the savings rate in households?
(ICAP's Official Question Bank for CAF 02 – Q. # 6.4b)

Q. 21
Explain the effect on the business sector of an economy of an increase in the household savings rate.
(ICAP's Official Question Bank for CAF 02 – Q. # 7.1c)

Q. 22
Explain three ways how a manufacturer of computer games might be affected by a 0.5% rise in interest rates by the central bank.
(ICAP's Official Question Bank for CAF 02 – Q. # 12.4)

CHAPTER EIGHT
MULTIPLIER AND ACCELERATOR

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A – ALTERNATIVE APPROACHES TO MACRO-ECONOMIC EQUILIBRIUM			
LO 1	KEYNESIAN AD – AS APPROACH TO MACROECONOMIC EQUILIBRIUM	8.2.1	8.3b, 9.8, 6.8 a&b
LO 2	TOTAL (OR AGGREGATE) EXPENDITURE APPROACH TO MACROECONOMIC EQUILIBRIUM	8.2.4	N/A
LO 3	SAVING-INVESTEMENT APPROACH TO MACROECONOMIC EQUILIBRIUM	8.2.3	8.2
PART B – MULTIPLIER AND ACCELERATOR			
LO 4	MULTIPLIER PRINCIPLE	8.3.2, 8.3.3, 8.3.4, 8.3.5	8.1, 8.3 a&c
LO 5	ACCELERATOR PRINCIPLE	8.4.2, 8.4.3	8.4, 9.4b
LO 6	INTERACTION OF MULTIPLIER AND ACCELERATOR	8.5.2, 8.5.3	N/A

*** October 2016 Edition*

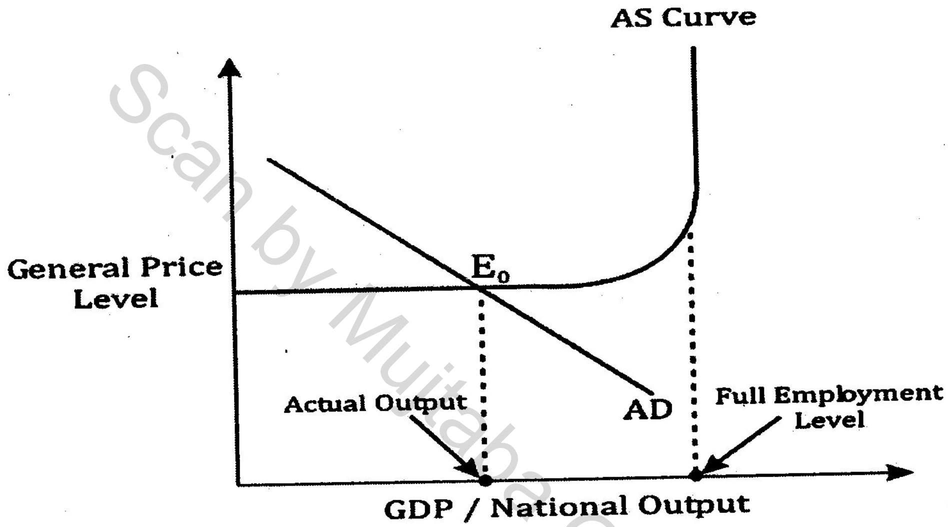
PART A – ALTERNATIVE APPROACHES TO MACRO-ECONOMIC EQUILIBRIUM

LO 1: KEYNESIAN AD – AS APPROACH TO MACROECONOMIC EQUILIBRIUM:

Keynesian AD – AS Equilibrium:

This approach was introduced by Keynes during Great Depression. He stated that an economy will be in equilibrium if AD = AS. However, AS Curve is horizontal at low level of output and vertical at full employment level.

Diagram:

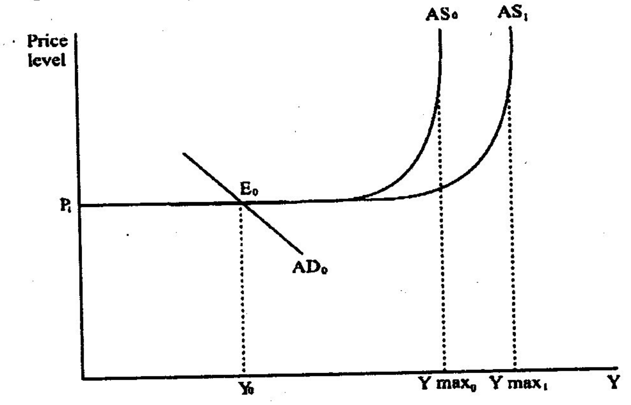


Explanation:

Keynes explained that, instead of increasing aggregate supply, government should increase aggregate demand to increase national income and output.

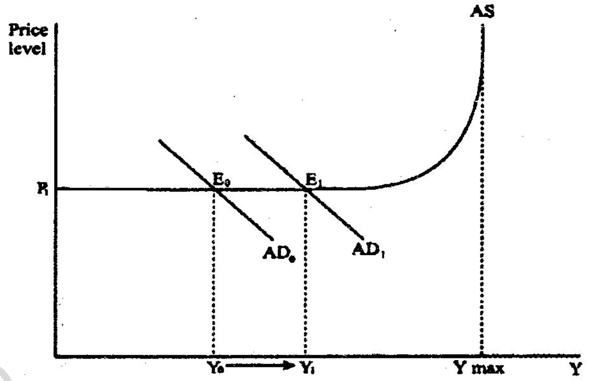
If Aggregate supply is boosted:

If AS is increased (e.g. by increasing factors of production or decreasing cost of production), there will be no change in the output of the economy because AD would remain fixed.



If Aggregate demand is boosted:

If AD is increased, price level will remain same but output will be increased, helping the economy to get out of depression.



CONCEPT REVIEW QUESTION

Q. 1

Explain with the help of a diagram using the concepts of Aggregate Demand and Aggregate Supply, how equilibrium level of national income is achieved.

(ICAP's Official Question Bank for CAF 02 – Q. # 9.8)

Q. 2

Explain, with the help of separate diagrams, why Keynes believed it was necessary to boost AD during a Depression, and not AS.

(ICAP's Official Question Bank for CAF 02 – Q. # 8.3b)

Q. 3

(a) Draw a graph using a Keynesian aggregate supply curve where the economy is in a deep recession.
(b) The government increases spending in the economy. Show how this will change the equilibrium in the economy. Make particular reference to:
(i) the general price level
(ii) the level of output in the economy
(c) How would a neo-classical model of the economy interpret an increase of government spending in a recession? Show with a diagram.

(ICAP's Official Question Bank for CAF 02 – Q. # 6.8)

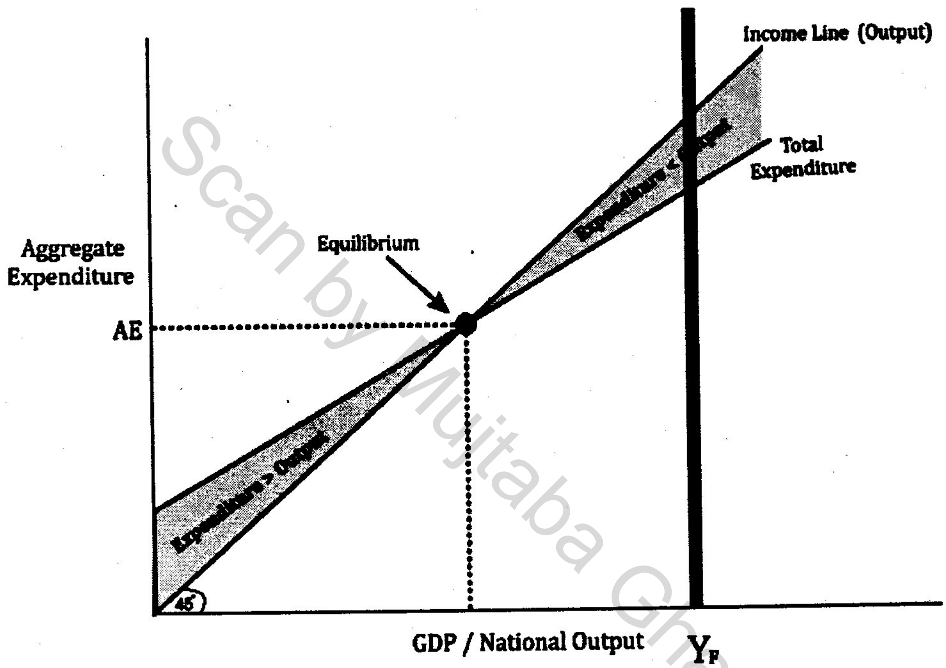
LO 2: TOTAL EXPENDITURE APPROACH TO MACROECONOMIC EQUILIBRIUM:

Total (or Aggregate) Expenditure Equilibrium:

Under Total (or Aggregate) Expenditure model, a simple closed economy will be in equilibrium at that level of output at which total expenditure (consumption + investment) will be equal to 45° line.

> **Exam Tip – 45° line**
> 45° line represents Aggregate Supply (output) curve and is also called Income Line.

Diagram:



Explanation:

In the above diagram, economy is in equilibrium at the point where the TE curve crosses the 45° line, because Total Expenditure (i.e. consumption and investment) in the economy is exactly equal to Total Output.

According to Keynes, it is NOT necessary that equilibrium level of national income is achieved at full employment level.

If Total Expenditure > Total Output (i.e. Aggregate Supply):

There will be shortage of inventories because consumers are trying to buy more output than is being produced. Producers will increase their production and staff. GDP/Output will increase until the equilibrium level of output was reached.

If Total Expenditure < Total Output (i.e. Aggregate Supply):

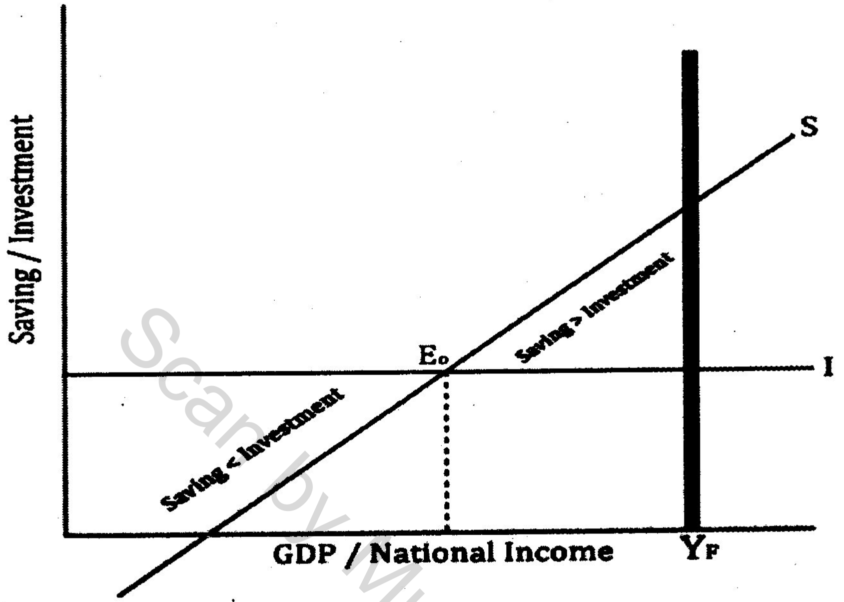
There will be surplus of inventories because consumers are not buying all the output that is being produced. Producers will cut-back their production and staff. GDP/Output will reduce until the equilibrium level of output was reached.

LO 3: SAVING–INVESTEMENT APPROACH TO MACROECONOMIC EQUILIBRIUM:

Saving-Investment Equilibrium:

Under Saving-Investment approach, a simple-closed economy will be in equilibrium at that level of output at which desired saving will be equal to desired investment.

Diagram:



Explanation:

In the above diagram of saving-investment approach:

1. Simple economy is assumed i.e. economy consists of only consumers and firms. Therefore, Effect of G, T, X and M are excluded from analysis.
2. Investment is autonomous i.e. independent of GDP. Therefore, investment curve is a horizontal line.
3. Households do not consume all of their income, and make savings as their income increases. Firms need investment for projects. An arrangement is made between individuals and firms through banks. Consequently, savings become investment. Economy is at equilibrium at the point where Saving Curve (S) equals Investment Curve (I).

According to Keynes, it is NOT necessary that equilibrium level of national income is achieved at full employment level.

If saving < investment:

There will be shortage of inventories because low saving means high consumption. Producers will increase their production and staff. GDP/Output will increase until the equilibrium level of output was reached.

If saving > investment:

There will be surplus of inventories because high saving means low consumption. Producers will cut-back their production and staff. GDP/Output will reduce until the equilibrium level of output was reached.

CONCEPT REVIEW QUESTION

Q. 4

Output is determined where savings of all of the households in an economy are equal to the desired investment opportunities. Explain the equilibrium between savings and investments with the help of diagram. (10)

(ICAP, CAF 02 Level – Autumn 2015)

PART B – MULTIPLIER AND ACCELERATOR

LO 4: MULTIPLIER PRINCIPLE:

Multiplier Effect/Principle:

Multiplier effect is the phenomenon that initial change in a component of aggregate demand will cause greater change in total output.

Multiplier:

Definition:

The multiplier is the ratio of the change in total output due to the change in a component of aggregate demand (e.g. investment).

Formula to calculate Multiplier:

Multiplier = 1/(MPS + MPT + MPM)

Exam Tips

1. If MPT or MPM is not given in the question, these may be assumed as zero.
2. Alternate formula to calculate Multiplier = Change in Output/Change in AD

Determinants of Size of Multiplier:

Multiplier is affected by following three leakages/withdrawals from circular flow of income:

1. Marginal Propensity to Save (MPS is the percentage of income that is saved).
2. Marginal Propensity to Tax (MPT is the percentage of income that is paid to government as tax).
3. Marginal Propensity to Import (MPM is the percentage of income that is used to buy goods and services from foreign economy).

Exam Tip

These determinants affect multiplier inversely i.e. the higher the MPS, MPT or MPM, the lower the multiplier.

Working of Multiplier with the help of Schedule/Table: (without MPT & MPM)

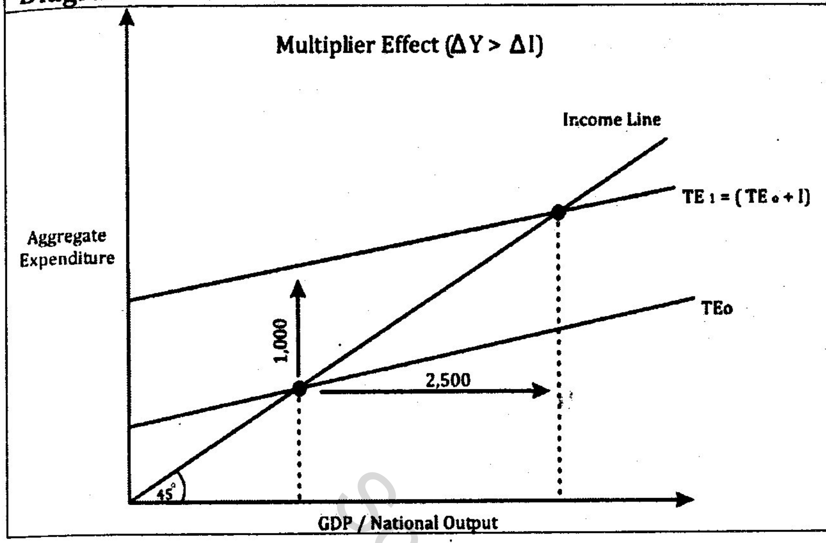
Assume that MPC is 0.6, which means MPS is 0.4. Further, assume that Rs. 1,000 is introduced in the economy.

Round	Change in AD	Change in Saving	Change in Consumption
	(A)	(B = A * MPS)	(C = A * MPC)
1st (initial)	1,000.00	400.00	600.00
2nd	600.00	240.00	360.00
3rd	360.00	144.00	216.00
4th	216.00	86.00	130.00
All later rounds	324.00	129.60	194.40
Total	**2,500.00*** **	**1,000.00**	**1,500.00**

*** Total change in output (Rs. 2,500) is equal to initial investment (Rs. 1,000) * Multiplier (2.5 = 1/0.4)

Multiplier effect with the help of diagram of Aggregate Expenditure:

Diagram



Explanation

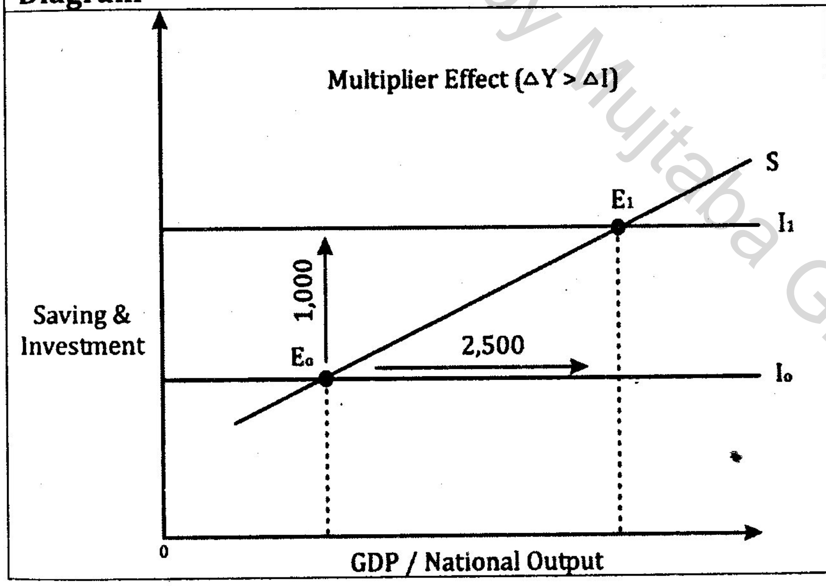
In the above diagram, the economy is in equilibrium at the point where the TE curve crosses the 45° line.

If now there is an increase in investment by Rs. 1,000, then AE_0 curve will shift to new position of AE_1 and now two curves will intersect at point E_1 which would be the new equilibrium level of income.

Hence, the diagram shows that an increase in investment by Rs. 1,000 would increase the national income by Rs. 2,500 (1,000× 2.5).

Multiplier effect with the help of diagram of Saving-Investment:

Diagram



Explanation

The curve I represents planned investment curve. The curve *S* represents saving curve. These two curves intersect at point E and hence, the equilibrium level of income is determined.

If now there is an increase in investment by Rs. 1,000 million, then I_0 curve will shift to the position of I_1 and the two curves I_1 and S will intersect at point E_1 which would be the new equilibrium level of income.

Hence, the diagram shows that an increase in investment by Rs. 1,000 million would increase the national income by Rs. 2,500 million (1,000× 2.5).

Assumptions of Multiplier:

1. MPS, MPT and MPM should remain stable.
2. Investments should be made repeatedly.
3. There should be spare capacity in the economy.

Limitations of Multiplier:

Inelastic Supply/Full employment level:

If supply is elastic (i.e. there is spare capacity), then multiplier will be effective and increase in investment will cause greater increase in GDP. However, if supply is inelastic (i.e. economy is at full capacity), then multiplier will be ineffective and further increase in investment will cause increase in prices and NOT much increase in GDP.

Time lag:

A long period of time is required between initial expenditure and when full effects of multiplier are obtained. There may be time delays towards implementing the plan, or in passing the money from one agent to another. Boom in economy will not be instant.

CONCEPT REVIEW QUESTION

Q. 5

What is 'Multiplier'? Explain the working of the Multiplier with the help of a numerical example. *(for the purpose of working, assume that marginal propensity to consume is equal to 0.6)* **(05)**

(ICAP, CAF 02 Level - Autumn 2013)

Q. 6

(a) Explain what do you understand by the term Multiplier. **(03)**

(b) What are the limitations of the Multiplier? **(06)**

(ICAP, CAF 02 Level - Autumn 2009)

(ICAP's Official Question Bank for CAF 02 – Q. # 8.1)

Q. 7

(a) Fill in this description of the multiplier: "the consumption of one person becomes the ___ ___ ___"

(b) Explain three limitations to the effectiveness of the multiplier.

(ICAP's Official Question Bank for CAF 02 – Q. # 8.3)

Q. 8

In an open economy, the marginal propensity to consume is 0.7 and the proportion of additional income that is spent on imported goods is 20%. National income is Rs. 100,000,000 and the current account is in balance. What would be the new equilibrium of national income if the government increases its expenditure by Rs. 50,000,000? **(02)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 9

What do you understand by the term 'Multiplier'? With the help of a diagram show the multiplier effect of an increase in investment by Rs. 100 million on the equilibrium level of income where marginal propensity to save is 1/3. **(06)**

(ICAP, CAF 02 Level - Spring 2016)

Q. 10

Compute the multiplier, if in an economy, out of every additional Rs. 100 of national income, 8% is saved, 15% is paid in taxes and 17% is leaked from the economy in imports. **(02)**

(ICAP, CAF 02 Level - Spring 2019)

Q. 11

Define the concept of Investment Multiplier. What determines its size? **(05)**

(ICAP, CAF 02 Level – Spring 2003)

LO 5: ACCELERATOR PRINCIPLE:

Accelerator Effect/Principle:

Output are positively related to Investment i.e. a change in output accelerates the change in investment.

How Accelerator works:

Suppose:

- Capital output ratio is 5:1 (which means 5 units of capital are required to produce 1 unit of output).
- Depreciation Rate is 10% (of last year's capital).

Table:

Year	Output	%age change in Output	Required Capital	New/Net Investment*	Depreciation	Gross/Total Investment (New Investment + Depreciation)	%age change in Investment
0	100		500				
1	100	0.0%	500	0	50	50	0.0
2	110	10.0%	550	50	50	100	100.0%
3	120	9.1%	600	50	55	105	5.0%
4	130	8.3%	650	50	60	110	4.8%
5	120	-7.7%	600	-50	65	15	-86.4%

*New/Net Investment is the difference between required capital.

Explanation of Table:

1. When output increases, level of investment also increases; although there is disparity between rate of changes in output and rate of changes in investment (due to depreciation rate being less than 100%).
2. Similarly, when output decreases, level of investment also decreases.
3. This is called the Accelerator Effect i.e. a change in output accelerates the change in investment.

Assumptions of Accelerator Principle:

1. Capital-Output ratio remains same.
2. Increase in aggregate output results in increase in real profit.
3. Supply of money is available in the market (specially credit money) so that new funds for investment are readily available.
4. Factors of production are available in market to undertake new investment easily.

Limitations of Accelerator Effect:

Existence of Spare Capacity:

If there is spare capacity in the firm, investments will not be increased because producers will use existing capacity to increase output instead of making new investment.

Time Lag/Adjustment cost:

Time and cost required to adjust level of capital stock are not considered in this simple model. These costs may be business costs due to installation of new machinery.

CONCEPT REVIEW QUESTION

Q. 12

Describe the principle of accelerator. Also state the assumptions underlying the principle of accelerator. **(05)**

(ICAP, CAF 02 Level – Autumn 2017)

Q. 13

Consider the following information and determine the rate of change of gross investment for each of the following five years (year 1 to 5) using the accelerator principle based on the following data:

- Capital output ratio is 4:1
- Depreciation is 10% of previous year's capital
- Output details for the five years are as follows:

Year	0	1	2	3	4	5
Output (in billion)	200	200	240	280	320	320

(07)

(ICAP, CAF 02 Level – Autumn 2016)

LO 6: INTERACTION OF MULTIPLIER AND ACCELERATOR:

Economists combine the multiplier model with the accelerator principle to explain business cycle.

If economy is expanding:

A change in level of output can induce a change in level of investment (accelerator), which can induce a magnified change in level of output (multiplier), which can induce a change in level of investment....... and so on. This process continues until the full capacity of the economy (i.e. Boom) is reached.

If economy is contracting:

When full capacity of economy is reached, economic growth rate slows down. The slower growth reduces investment (reverse accelerator), which causes further decreases in output (reverse multiplier). This process continues until the economy experiences depression.

These recurring fluctuations in output of an economy over a period of time are called Business Cycle.

CONCEPT REVIEW QUESTION

Q. 14

Briefly explain the multiplier-accelerator theory.

(ICAP, CAF 02 Level – Spring 2005)

CHAPTER NINE

GROWTH AND TAXES

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A - GROWTH			
LO 1	GROWTH, ADVANTAGES AND DISADVANTAGES	9.1.1, 9.1.2, 9.1.5, 9.1.6	N/A
LO 2	BUSINESS CYCLE AND ITS INDICATORS	9.1.3, 9.1.4	9.6, 9.4a
LO 3	FISCAL POLICY – TOOLS OBJECTIVES AND LIMITATIONS	9.2.1, 9.2.2, 9.2.3	9.5b, 9.7b
PART B - TAXES			
LO 4	FUNCTIONS AND CHARACTERISTICS OF TAX	9.3.2, 9.3.5	N/A
LO 5	TYPES OF TAXES	9.3.4, 9.3.6, 9.3.7	9.1, 9.3
LO 6	CANONS (OR PRINCIPLES) OF TAXATION	9.3.3	9.3a, 10.3

*** October 2016 Edition*

PART A – GROWTH

LO 1: GROWTH, ADVANTAGES AND DISADVANTAGES:

Economic Growth:

Definition:

Economic growth means long-term increase in potential output of a country.

$$\text{Growth Rate (\%)} = (\text{Real GDP of } Y_1 - \text{Real GDP of } Y_0) / \text{Real GDP of } Y_0 * 100$$

Advantages:

- **Higher living standards:**
  Economic growth results in increase in income of individuals which increases their living standard.

- **High employments:**
  With increase in potential output, more employment opportunities are created.

- **Fiscal Benefits:**
  When GDP and national income of a country is increased, government gets higher tax revenue from individuals and firms. This helps government in meeting its objectives.

- **Enterprise confidence:**
  Sustained economic growth results in business profits and increases confidence of businessmen.

- **Higher Investment:**
  During Economic growth, aggregate demand increases which cause increase in investment.

- **Social Welfare:**
  Higher growth enhances scope of welfare activities as Government has more money to spend on poor people.

Disadvantages/Costs:

- **Environmental problems (or Negative externalities)**
  Growth in economy has side effect on environment e.g. air and water pollution due to industrial wastages, road congestion, deforestation.

- **Inequality of income and wealth among citizens**
  Increase in output and national income is not equally distributed in the economy. Most of the fruits of economic growth are limited to rich people only.

- **Risk of inflation**
  Increase in aggregate demand beyond full employment level may result in demand-pull inflation.

- **Social problems**
  To increase output, increased working hours of labor may cause disturbance in work-life balance leading to social problems.

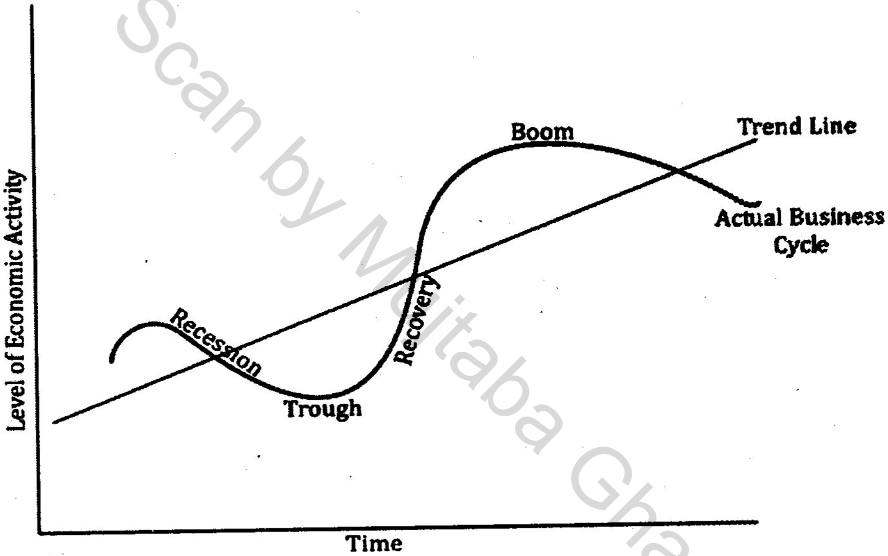
CONCEPT REVIEW QUESTION

Q. 1
What is meant by Economic Growth? Briefly explain four advantages and four disadvantages of Economic Growth. **(10)**
(PIPFA – Winter 2016)

Q. 2
Alongside the benefits of economic growth, certain costs are also associated with it. Identify and discuss the costs associated with economic growth. **(06)**
(ICAP, CAF 02 Level – Spring 2018)

LO 2: BUSINESS CYCLE AND ITS INDICATORS:

Business Cycles: *(or Trade Cycles)*
Business cycles are economy-wide periodic fluctuations in national output, income, and employment.



The ***trend line*** shows a stable and steady growth path for the macroeconomy. However, in reality, the growth path follows the different fluctuations in business cycle called Peak, Recession, Trough and Recovery. To provide stability in economic growth, government takes actions to move the economy closer to trend line.

Boom / Peak / Prosperity:
Peak is the highest point in the business cycle, just before it begins to turn down.

Recession/ Downturn/Contraction:
Recession refers to the decline in Real GDP that occurs after the economy has peaked.

Trough/Depression:
A severe and prolonged recession is called Depression. The trough is the lowest point in the business cycle, just before it begins to turn up.

Recovery/ Upturn/ Expansion:
Expansion refers to the increase in Real GDP that occurs after the economy has depressed.

Characteristics of Four Phases (or Stages) of Business Cycle:

	Boom / Peak / Prosperity	Recession/ Downturn/ Contraction	Trough/ Depression	Recovery/ Upturn/ Expansion
Level of GDP/Output/Income	High	Decreasing	Low	Increasing
Level of Employment	High	Decreasing	Low	Increasing
Utilization of Resources	High	Decreasing	Low	Increasing
General Price Level and Profits of businesses	High	Decreasing	Low	Increasing
Level of Bank Credits	High	Decreasing	Low	Increasing
Level of Interest Rates	High	Decreasing	Low	Increasing
Level of Confidence of Businessmen	Optimist	Decreasing	Pessimist	Increasing

Indicators of Business Cycle (Growth or Recession):

1. **Leading Economic Indicators:**
   These indicators are used to forecast at what stage economy will be in after some months. These are used to assess whether a peak or trough will be reached in next 3 – 12 months.
   - Index of business confidence
   - Manufacturers' new orders
   - New building permits for private housing
   - Money supply

2. **Coincident Economic Indicators:**
   These indicators are events that occur at the same time as peak or trough occurs. These are used to assess whether an economy is in peak or trough.
   - Number of people in employment
   - Industrial production
   - Personal incomes
   - Manufacturing and trade sales

3. **Lagging Economic Indicators:**
   These indicators occur 3 – 12 months after peak or trough.
   - Consumer Price Index (i.e. level of inflation)
   - Average duration of unemployment
   - Interest rates
   - Average income

CONCEPT REVIEW QUESTION

Q. 3
(a) Identify and briefly explain the different phases of business cycle. **(06)**
(b) List any eight indicators which would confirm the stages of business cycle the economy is in. **(04)**
(ICAP, CAF 02 Level – Autumn 2016)

Q. 4
What is meant by the term 'Coincident economic indicators' in the context of assessment of a country's economic stage in a business cycle? Also identify the economic characteristics which are usually observed during recessionary periods. **(05)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 5
(a) Explain the features of an economy in a recession, and what might cause a subsequent recovery.
(b) What are some of the leading, coincident and lagging indicators which might confirm these phases?
(ICAP's Official Question Bank for CAF 02 – Q. # 9.6)

Q. 6
Briefly describe any two features of an economy in a period of downturn. **(02)**
(ICAP, CAF 02 Level - Spring 2016)

LO 3: FISCAL POLICY – TOOLS OBJECTIVES AND LIMITATIONS:

Definition and Types of Fiscal Policy:

Definition:
Fiscal policies are policies undertaken by a government to achieve macroeconomic objectives by influencing aggregate demand through government spending and taxation.

Types of Fiscal Policy and its Tools:

1. **Expansionary Fiscal Policies:**
   These policies seek to increase the rate of economic growth e.g.
   - Increase in government spending.
   - Increase in transfer payments
   - Decrease in taxes (e.g. tax cuts, rebates, exemptions)
   - Increase in subsidies

2. **Contractionary Fiscal Policies:**
   These policies seek to slow down the rate of economic growth e.g.
   - Decrease in government spending.
   - Decrease in transfer payments
   - Increase in taxes (e.g. high tax rates, new taxes)
   - Decrease in subsidies

Objectives of Fiscal Policy:

Objectives of fiscal policy are same as we have studies in Chapter # 6 *(LO 1: Objectives of Macroeconomic Policies)*.

Limitations of Fiscal Policies:

Crowding-out Effect:
Crowding-Out effect means increase in Government Expenditure may lead to decrease in Private Expenditure e.g. if government incurs expenditures on hospitals or colleges, then private investment in these areas will reduce.

Trade-off Effect due to conflict in objectives:
All macro-economic objectives cannot be achieved simultaneously e.g. if inflation is reduced, unemployment will increase and vice-versa.

Forecasting:
Fiscal policy is based on prediction of many economic variables e.g. multiplier, or estimated tax receipts. It is difficult to accurately predict effect of these variables on GDP.

Time-lag:
There may be considerable time-lag between planning a fiscal policy and witnessing outcomes of fiscal policy.

Negative effects of Tax:
Raising tax to implement a fiscal policy may cause demotivation to work. Hence, a fall in productivity of labor may be observed.

CONCEPT REVIEW QUESTION

Q. 7
What is Fiscal Policy? Enlist the main objectives of Fiscal Policy. **(05)**
(PIPFA – Summer 2016)

Q. 8
Describe four limitations of fiscal policy. **(06)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 9
Differentiate Expansionary and Contractionary Fiscal Policy. **(04)**
(PIPFA – Winter 2017)

Q. 10
Identify four main objectives of fiscal policy and briefly describe how these objectives may be achieved. **(04)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 11
Explain any two limitations of fiscal policy. **(04)**
(ICAP, CAF 02 Level – Spring 2017)

Q. 12
(a) Describe the main objectives of macroeconomic policy in a mixed economy.
(b) Explain how fiscal policy can be used to achieve these objectives.
(ICAP's Official Question Bank for CAF 02 – Q. # 9.5)

PART B – TAXES

LO 4: FUNCTIONS AND CHARACTERISTICS OF TAX:

Functions of Taxes:

Following are different functions (or purposes) of taxes:

- **Fiscal:**
  As a tool of fiscal policy, government can use tax to influence Aggregate Demand in the economy to manage economic growth. Taxes also raise revenue for government. Government can allocate these resources to various projects in the economy.

- **Allocation:**
  Taxes are a tool used by government to reallocate income between rich and poor to reduce inequality of income and wealth.

- **Regulatory:**
  Government uses taxes to encourage or discourage production and consumption of goods in economy e.g. by charging higher taxes on harmful or luxury goods and by providing subsidies on necessities of life.

- **Incentive:**
  To appreciate past achievement of certain persons of society, some special tax reductions or exemptions are given to them.

Good Characteristics of a Tax System:

- **Efficiency:**
  Tax should be raised without creating negative impacts on economy e.g. higher taxes may discourage people to earn or spend more.

- **Equitable:**
  Taxes should be imposed on people's ability to pay i.e. rich should be taxed more, and poor should be taxed less. It will ensure equal distribution of wealth in an economy.

- **Benefit Principle:**
  Govt. should impose tax on people in proportion to the benefit they receive from government programs.

LO 5: TYPES OF TAXES:

Taxes can be classified into various types e.g.

- Direct and Indirect Taxes, OR
- Flat, Progressive and Regressive Taxes

Direct and Indirect Taxes::

Direct Tax:

A direct tax is a tax levied directly on income and profits of individuals and firms. It is paid by tax payer directly to revenue authorities, and cannot be shifted to others.

Examples include:

- Income tax
- Wealth tax
- Inheritance tax
- Capital gains tax.

Indirect Tax:

An indirect tax is a tax levied on consumption of goods and services. It is paid by an intermediary (a supplier) to revenue authorities, but shifted by taxpayers to consumers by including it in the price of the good.

Examples include:

- Sales Tax / Value-added Tax
- Fuel Tax
- Excise Duty
- Custom Duty

Advantages and Disadvantages of Direct and Indirect Taxes:

Following are some advantages and disadvantages of taxes from government's perspective.

	Direct Taxes	Indirect Taxes
Advantages	▪ **Equitable:** As rich pays more and poor pays less, creating an equal distribution of income. ▪ **Certain:** Revenue generation for government is certain as people don't stop earning if government imposes tax. ▪ **Low cost of collection:** It is economical way to raise revenue. ▪ **Flexible:** Government can quickly raise revenue by raising direct taxes.	▪ **Changes the demand of goods:** Government can reduce the demand of harmful goods by imposing direct tax (e.g. cigarette or alcohol). ▪ **Increases tax net:** Indirect taxes are a mean to reach every person in the economy. ▪ **Allows people greater choice:** As they have liberty on choosing whether and when to consume goods and pay. ▪ **Difficult to evade:** Indirect taxes are usually the part of the price of good. Therefore they are paid at time of transaction and cannot be evaded.
Disadvantages	▪ **Discourages saving/investment** If tax rates are too high, individuals and firms will have no money to save and invest. ▪ **Possible to evade:** It is possible to understate income in tax return to avoid tax payments to government. ▪ **Unpopular:** When a tax payer is directly paying to government, he feels bad.	▪ **Increases inequality:** As rich and poor pay the same. ▪ **Causes cost-push inflation:** As price of goods is increased. ▪ **Can motivate "black market":** Consumer and producers may collude with each other to avoid tax payment (e.g. by getting goods without bill or buying from illegal market). ▪ **Uncertain** As people may stop buying if items are taxed heavily. ▪ **High cost of collection** Cost of collection of indirect tax is comparatively high.

Flat, Progressive and Regressive Taxes:

Definition:

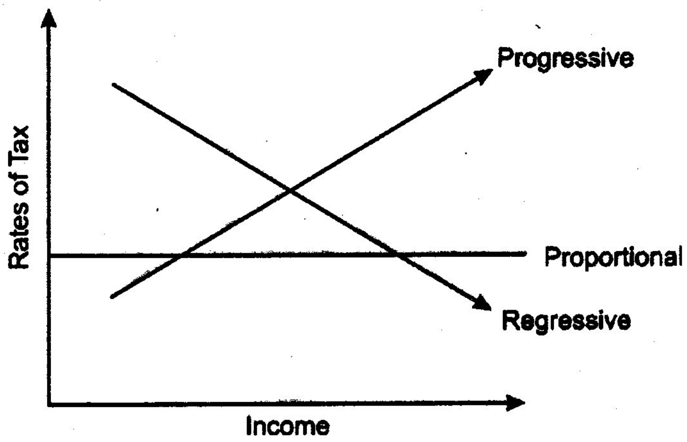
- **Flat/Proportional Tax:**
  A flat/proportional tax means percentage (or rate) of tax remains same as income goes up e.g. income tax on companies.
- **Progressive Tax:**
  A progressive tax means percentage (or rate) of tax goes up as income goes up e.g. income tax on salaries.
- **Regressive Tax:**
  A regressive tax means percentage (or rate) rate of tax goes down as income goes up e.g. sales tax.

Table:

Suppose income of Mr. A is Rs. 1,000 and he pays tax of Rs. 100 on this income.

Situation #	If income is increased to....	... and now he pays total tax of ...	Tax System will be ......
(a)	Rs. 2,000	Rs. 250	Progressive (because tax rate has increased to 12.5% = 250/2,000)
(b)	Rs. 2,000	Rs. 200	Proportional (because tax rate is same 10 % = 200/2,000)
(c)	Rs. 2,000	Rs. 150	Regressive (because tax rate has decreased to 7.5% = 150/2,000)

Diagram:



CONCEPT REVIEW QUESTION

Q. 13
(a) What is meant by 'direct taxation' and 'indirect taxation'? Give two examples of each type of taxation. **(04)**
(b) State any three advantages and three disadvantages of direct and indirect taxation. **(06)**
(ICAP, CAF 02 Level - Autumn 2016)

Q. 14
State two advantages and two disadvantages of indirect taxation. **(04)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 15
(a) What is meant by Indirect Taxes? Give three examples of Indirect Taxes. **(02)**
(b) Briefly explain the disadvantages of Indirect Taxes. **(09)**
(ICAP, CAF 02 Level - Autumn 2009)
(ICAP's Official Question Bank for CAF 02 - Q. # 9.1)

Q. 16
What is meant by 'Regressive', 'Proportional' and 'Progressive' taxes? Give one example of each of the above types of taxes in the context of Pakistan. **(06)**
(ICAP, CAF 02 Level - Autumn 2017)

LO 6: CANONS (OR PRINCIPLES) OF TAXATION:

Canons (or principles) of taxation mean principles of a good tax system from administrative point of view.

Four canons of taxation by Adam Smith:

Canon of equality:
Taxes should be imposed on people's ability to pay i.e. rich should be taxed more, and poor should be taxed less. It will ensure equal distribution of wealth in an economy.

Canon of certainty:
Tax payers should be clearly informed as to purpose of tax, time of payment, manner of payment, amount of payment.
There should not be a single element of uncertainty in tax.

Canon of convenience:
Every tax should be levied in such a way that it is most convenient for the tax payer e.g. property tax is paid when rent is due or property is sold/purchased. Similarly, consumers taxes are paid when consumer purchases the good.

Conon of economy:
Tax is economical when the cost of collecting it is small. Further, whole amount of tax should come in treasury without any embezzlement during tax collection process.
A tax is also economical when it does not damage the economic progress of the country i.e. taxes should not discourage savings and investment.

Other Canons of Taxation:

- **Fiscal Adequacy or Productivity:**
Taxes should be levied in such a way that government tax sufficient funds for its projects, as well as taxes should not damage productive capacity of economy.

- **Canon of Simplicity:**
The system of taxation should be made as simple to understand for everyone so that tax collectors are not involved in corruption or oppression.

- **Canon of Flexibility:**
Taxes can easily be increased or decreased according to changing needs of government.

- **Canon of Diversity:**
There should be many taxes of different varieties so that every class of citizen may be called upon to pay.

- **Canon of compatibility:**
Tax system should be compatible with social and economic objectives e.g. accelerating economic growth and reduction of inequality of income and wealth.

CONCEPT REVIEW QUESTION

Q. 17
Explain four main canons of taxation as suggested by Adam Smith that are usually considered by a government while designing the tax system of the country. **(08)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 18
State any eight characteristics which are important for creating a good system of taxation. **(04)**
(ICAP, CAF 02 Level – Autumn 2017)

Q. 19
Briefly describe Adam's canons of taxation.
(ICAP's Official Question Bank for CAF 02 – Q. # 10.3)

Q. 20
Distinguish between direct and indirect taxation and explain the principles underlying a good taxation system.
(ICAP's Official Question Bank for CAF 02 – Q. # 9.3a)

CHAPTER TEN

PUBLIC FINANCE

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A - PUBLIC FINANCE			
LO 1	DEFINITION, FUNCTIONS AND IMPORTANCE OF PUBLIC FINANCE	10.1.2, 10.1.3	10.1
LO 2	DIFFERENCE BETWEEN PUBLIC AND PRIVATE FINANCE	10.1.1	N/A
PART B - PUBLIC EXPENDITURE			
LO 3	ROLE OF PUBLIC EXPENDITURE IN A DEVELOPING COUNTRY	10.2.2	10.2
LO 4	CAUSES OF CONTINUOUS INCREASE IN PUBLIC EXPENDITURE	10.2.1	N/A
LO 5	FISCAL BUDGET AND ITS DEFICIT	9.2.4, 9.2.6	N/A

***** October 2016 Edition***

PART A – PUBLIC FINANCE

LO 1: DEFINITION, FUNCTIONS AND IMPORTANCE OF PUBLIC FINANCE:

Definition of Public Finance:

Public finance deals with the income and expenditure of public authorities. It deals with how the government should raise the finances:

- to meet its ever increasing expenditure and
- to meet its economic and social objectives.

Functions of Public Finance:

According to Musgraves, following are major functions of public finance:

1. **Allocative Function:**
   Allocation function refers how the country's resources will be allocated to different sectors of the economy.
   Government divides its resources among various public goods to be provided to members of society either free or at prices well below their market value e.g. infrastructure or national defense.

2. **Distributive Function:**
   Distribution function refers how to redistribute resources between individuals of society to reduce economic inequalities created by free markets.
   Government uses taxation and other tools to ensure optimal income distribution.

3. **Stabilization Function:**
   Stabilization refers to the overall role of ensuring economic stability in general price levels, unemployment levels, economic growth and in balance of payment etc.
   This is achieved particularly by fiscal and monetary policies.

Importance of Public Finance:

Public finance is used not only to raise finance for expenditure of government, but can also be used to achieve economic and social objectives of government. Public finance is important in following ways:

1. **Equity:**
   Public finance plays a great role in eliminating or reducing the inequalities of income and wealth in economy. This is achievable by transferring the purchasing power from the rich to the poor.

2. **Taxation:**
   Taxation is a tool used in public finance to control economic activity e.g. it can be levied in such a way:
   - to encourage certain useful industries by giving exemptions, and
   - to discourage certain harmful industries (e.g. tobacco, alcohol) by imposing higher taxes

3. **Provision Public Goods:**
   Governments provide public good e.g. roads, military forces, lighthouses, and streetlights. Private citizens even the wealthy ones would not voluntarily provide these services, and therefore public finance addresses these areas through allocative function.

4. **Economic planning:**
Economic plans of government require long period of time (e.g. years) which requires huge funds. Thus, government need to arrange and combine resources through taxation, expenditure and public borrowing effectively which is done by public finance.

CONCEPT REVIEW QUESTION

Q. 1
Briefly describe the main functions of 'Public finance' as stated by Musgrave. **(06)**
(ICAP, CAF 02 Level – Spring 2017)

LO 2: DIFFERENCE BETWEEN PUBLIC AND PRIVATE FINANCE:

	Private Finance	Public Finance
Adjustment of income and expenditure	Individuals adjust their expenditure according to their revenue.	Government adjusts its revenue according to its expenditure.
Budgeting	▪ Individuals make budget monthly or even more frequently. ▪ Individuals try their best to make budget with surplus or balanced.	▪ Public authorities make budget on yearly basis. ▪ Public authorities do not necessarily run balanced budget, rather they may run deficit budget to stimulate economic activities.
Borrowing	Individuals can obtain loan only within the country.	Government has multiples options of borrowings i.e. from home and foreign countries/organizations.
Deficit Financing	Individuals cannot create money to meet their expenditures.	Government can print currency notes to create money to finance its debt.
Different objectives	Focuses on individual welfare.	Focuses on welfare of overall society.
Provision for the future	Individuals plan for short-run focusing on quick returns.	Government plans for the long-run, for future generations.
Secrecy	Earning and spending matters are confidential affair of individuals.	Government makes public its sources of finance and expenditure to ensure transparency.
Subject	A subject of micro economics.	A subject of macro economics.

PART B – PUBLIC EXPENDITURE

LO 3: ROLE OF PUBLIC EXPENDITURE IN A DEVELOPING COUNTRY:

Public expenditure means the expenditure incurred by public authorities like federal, provincial or local government authorities.

If carefully planned and effectively used, public expenditure can promote economic development in following ways:

Role of public expenditure to increase production in recession:
In recession, where there is idle capacity and unemployed workers, government can increase production by increasing its public expenditure. Public expenditure will increase aggregate demand. This increase will have multiplier effect and will cause increase in production and employment levels.

Role of public expenditure to ensure equal distribution of income and wealth:
Some of the public expenditures will eliminate or reduce inequality of income e.g. social security programs, subsidies, income support programs.

Role of public expenditure in Social and Economic Development:
Economic expenditures like the roads and railways, irrigation and power projects are essential for speeding-up economic development. Social expenditures like hospitals, schools, and colleges and technical institutions too are essential. Money for these things cannot come out of private sources.

Balanced Regional Growth:
Special attention has to be paid to the development of backward areas and underdeveloped regions. This requires huge amounts for which reliance has to be placed on public expenditure.

Development of Agriculture and Industry:
Development of agriculture and industry is vital to the overall economic progress of a country. To promote economic development, Government has to incur lot of expenditure in the agricultural sector, e.g., on irrigation and power, seed farms, fertilizer factories, warehouses, etc., and in the industrial sector by setting up public enterprises like the steel plants, heavy electrical, heavy engineering, machine-making factories, etc.

Exploration and Extraction of Mineral Resources:
Minerals provide a base for further economic development. The government has to undertake schemes of exploration and development of essential minerals, e.g., coal and oil.

Subsidies and Grants:
Subsidies and grants have to be given to encourage the production of certain goods especially for export to earn foreign exchange.

CONCEPT REVIEW QUESTION

Q. 2
Determine the goals of public expenditure. **(05)**
(ICAP, CAF 02 Level – Spring 2005)

LO 4: CAUSES OF CONTINUOUS INCREASE IN PUBLIC EXPENDITURE:

Size of Population of Country:
Due to increase in population growth, expansion in administrative activities of the government (like defence, police, and judiciary) has resulted in a growth of public expenditures in these areas.

War and national defense:
Countries which are at war or have threat of war, have to invest heavily in defense equipment to maintain a minimum deterrence level. Condition worsens when countries have rivals in neighborhood like Pakistan and India.

Welfare state ideology:
Modern states different programmes to promote people's welfare like health, education. It builds up not only social infrastructure but also economic infrastructure in the form of transport, electricity, etc.

Economic Development:
Economic development is largely conditioned by the availability of economic infrastructure. Only by building up economic infrastructure, road, transport, electricity, etc., the structure of an economy can be made to improve. Obviously, for financing these activities, government spends money.

Government Subsidies:
The Government has been providing subsidies on a number of items such as food, fertilizers, exports, education, etc. Because of the massive amounts of subsidies, the public expenditure has increased.

Increase in Ability to Tax:
The increase in national income also resulted in more income to the government by way of tax revenue and other income. As a result of which the government Expenditure also increased because under the circumstances, the Government is not only expected to expand its traditional activities but it also undertakes new activities.

Debt Servicing:
The government has been borrowing heavily both from the domestic market and from foreign sources, to meet its expenditure. As a result of which, the government has to make huge amounts of money towards interest payments.

Expansion in social services:
Increase in social services (e.g. education, public health services), and public utility services (e.g. electricity, water, transport) have increased public expenditure.

Rise in price level.
Since the beginning of the Second World War, the price level has been showing an upward trend in almost all the countries of the world. Like individuals, the Government has also to buy goods and services at higher prices.

CONCEPT REVIEW QUESTION

Q. 3
In recent times, public expenditure has increased enormously. Briefly describe any four principal causes of growing public expenditure of nations. **(06)**
(ICAP, CAF 02 Level – Spring 2018)

LO 5: FISCAL BUDGET AND ITS DEFICIT:

Fiscal Budget:

Definition:
Fiscal Budget or Govt. Budget is a statement of estimated revenue and expenditures of governments during a period.

Uses/Objectives of Fiscal Budget:
- To keep a check on government.
- To ensure that government spends money only that is likely to receive.

Deficit in Fiscal Budget:
Fiscal budget may be in Deficit, or in Surplus or Balanced.

If a government has a deficit in fiscal budget, it will have to either:
- finance deficit (i.e. paying deficit through borrowings by issuing sovereign bonds, T-bills, or other borrowings) or
- correct deficit (i.e. reducing deficit by imposing additional taxes and restricting expenditures to essential goods)

Relationship between Fiscal Deficit and National Debt:

National debt is the borrowings by government. The national debt is simply the accumulation of the government's budget deficits. Increase in fiscal deficit will lead to increase in national debt.

Study Tip - Public Debt

Public debt is the aggregate of debt by government, and debt by public (e.g. consumer debt, mortgage debt, credit debt).

CONCEPT REVIEW QUESTION

Q. 4

What is meant by the terms "Budget Surplus" and "Budget Deficit"? Differentiate Government deficit from Government debt? **(06)**

(ICMA Pakistan - Summer 2012)

CHAPTER ELEVEN

MONEY

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A – BASICS OF MONEY			
LO 1	BARTER SYSTEM, AND EVOLUATION OF MONEY	11.2.1, 11.2.3, 11.2.5	N/A
LO 2	FOUR FUNCTIONS OF MONEY	11.2.2, 11.1.4, 11.1.5, 11.1.6	11.3a, 11.7
LO 3	CHARACTERISTICS OF MONEY	11.2.4	N/A
PART B – SUPPLY AND DEMAND OF MONEY			
LO 4	MONEY SUPPLY AND ITS COMPONENTS	11.4.2, 11.4.3	11.1 a&b
LO 5	KEYNES' LIQUIDITY PREFERENCE THEORY	11.3.5, 11.3.4, 11.3.7	11.3b, 11.6
PART C – INFLATION			
LO 6	DEFINITION, MEASUREMENT, FORMS AND IMPACT OF INFLATION	11.6.1, 11.6.2, 11.6.3, 11.6.4	N/A
LO 7	DEMAND-PULL INFLATION, CAUSES AND MEASURES	11.6.5, 11.6.7	9.2b
LO 8	COST-PUSH INFLATION, CAUSES AND MEASURES	11.6.5, 11.6.7	9.2b
LO 9	QUANTITY THEORY OF MONEY	11.5.1, 11.5.2, 11.4.4	11.1c, 11.2
PART D – UNEMPLOYMENT			
LO 10	UNEMPLOYMENT, ITS TYPES AND MEASURES	11.6.8, 11.6.9	11.4c
PART E – PHILLIPS CURVE			
LO 11	PHILLIPS CURVE	11.6.10	11.4a, 11.5 a&b
LO 12	LONG-RUN PHILLIPS CURVE	11.6.10	11.5c
LO 13	NATURAL RATE OF UNEMPLOYMENT	11.6.10	11.4b

*** October 2016 Edition*

PART A – BASICS OF MONEY

LO 1: BARTER SYSTEM, AND EVOLUATION OF MONEY:

Barter System:

Barter means exchange of goods for other goods (without money).

Problems associated with Barter System:

1. Lack of double coincidence of wants (i.e. difficult to find a person with opposite needs)
2. Lack of standard to decide rate of exchange.
3. Lack of storing or savings
4. Lack of divisibility of goods

Money:

Definition of Money:

Money is anything that serves as a commonly accepted medium of exchange.

Evolution/Kinds of Money:

- **Commodity Money:** Particular physical goods (e.g. cattle, oil, gold, silver), with some intrinsic value, that also serves as a medium of exchange.

  A slightly different kind of money is **'Commodity-backed money'** which can be exchanged for commodity on demand e.g. Gold Standards.

- **Metallic Money:** By 18th century, commodity money was almost exclusively limited to metals like silver and gold, which is called metallic money.
  Advantage: It has intrinsic value so there was no need for the govt. to guarantee its value.
  Shortcoming: Scarce resources are required to dig it out of the ground.

- **Paper Money:** Paper money is a piece of printed paper with engraving on it by government. Many years ago, paper money was backed by gold or silver. However, today paper money is fiat money. **Fiat money** is the money which has no intrinsic value; however, it is recognized as the legally accepted medium of exchange.

- **Bank Money** (e.g. cheques), and **Electronic Money** (e.g. ATM cards and electronic transfer of funds).

CONCEPT REVIEW QUESTION

Q. 1

Clarify the following types of money: **(02)**
(a) Commodity money **(02)**
(b) Commodity backed money **(02)**
(c) Fiat money **(PIPFA – Winter 2017)**

LO 2: FOUR FUNCTIONS OF MONEY:

Functions of Money:

1. **To act as a medium of exchange:**
   Money is accepted throughout an economy as a means of payment for goods and services. It allows traders to buy and sell goods without barter.

2. **To act as a unit of account (or measure of value):**
   Money allows people to compare the relative prices of different and dissimilar goods through a common denomination which everybody understands.

3. **To act as a store of value or wealth:**
   Money can easily and safely be stored in large quantities. Any other commodity will usually require large space and will be subject to deterioration.

4. **To act as a standard of deferred payment:**
   Money (i.e. credit money) allows people to purchase goods and services in current period and to pay in future.

Effect of High-Inflation on Functions of Money

1. People don't use money as medium of exchange for transactions and move to barter system.
2. Inflation distorts relative prices between goods and makes comparison difficult.
3. Money will lose its value day by day and will not be used as a store of value.
4. Receivable party will receive less in future. Therefore, people are not willing to accept it as a mode of deferred payment.

Different views of economists about role of Money in macro-economy:

1. **Classical Economists:**
   Classical economists believe that money is used as medium of exchange in market. Although, it has increased efficiency of market but does not play any additional role in determination of demand or GDP. They view money as 'neutral'.

2. **Keynesian Economists:**
   Keynesians believe that money can be stored and can be used in future to purchase goods or services. Hence, they believe that money can be used to influence aggregate demand and output in the economy.

3. **Monetarist Economists:**
   Monetarists believe that if monetary policies are used to influence aggregate demand and output, it may cause boost in output in short-run but ultimately it will lead to inflation in the economy.

CONCEPT REVIEW QUESTION

Q. 2

The problems of barter system led to the evolution of money in its current form. Discuss how money resolved these problems. **(03)**

(ICAP, CAF 02 Level- Spring 2019)

Q. 3

Identify the four important functions of money and highlight their significance.

(ICAP, CAF 02 Level - Spring 2008)
(ICAP's Official Question Bank for CAF 02 - Q. # 11.3a)

Q. 4
Explain what is meant by the term "money" AND explain the functions it performs.
(ICAP's Official Question Bank for CAF 02 – Q. # 11.7)

Q. 5
Explain the functions of Money. How does inflation affect the functions of Money? **(10)**
(PIPFA – Summer 2017)

LO 3: CHARACTERISTICS OF MONEY:

1. **Durability:**
   It is important that money does not deteriorate physically, especially as it is a medium for storing value over time.

2. **Divisibility:**
   Money needs should be exchangeable for both large items and small items.

3. **Transportability**
   Transactions can take place at many different locations, money must be easily portable from one location to another.

4. **Non-counterfeitability:**
   Money that is easily counterfeited would quickly lose its value because anyone could create their own money.

CONCEPT REVIEW QUESTION

Q. 6
Point out the essential attributes of good money. **(05)**
(ICAP, CAF 02 Level – Autumn 2002)

PART B – SUPPLY AND DEMAND OF MONEY

LO 4: MONEY SUPPLY AND ITS COMPONENTS:

Money Supply:
Money supply means total amount of **monetary assets in circulation** in an economy at a specific time.
Government has ultimate control over money supply.

Importance of Supply of Money:
Supply of money:
- directly affects Price Level.
- inversely affects Interest rate.

Types of Money:
Economists have adopted a scaled system for categorizations of different components of money. As you move to "higher" scale, the additional components of money become less and less liquid.
- Narrow/Transactional Money (M0): This layer or component of money includes Notes and Coins in circulation.

- M1 = M0 + Checking deposit.
  Checking deposit is the money that is in people's accounts which they can access immediately.
- M2 = M1 + Saving deposit.
  Saving deposit is the money that belongs to people but which they cannot access immediately.
- Broad Money (M3) = M2 + Institutional money market funds (e.g. Prize Bonds).

Study Tip

Now a days, concept of money is limited to M1 (i.e. only currency and checking deposits are included in money).

CONCEPT REVIEW QUESTION

Q. 7

What is Money Supply? Explain the components of Money Supply. **(06)**

(PIPFA-Summer 2018)

Q. 8

(a) Explain what is meant by the term 'the money supply'.

(b) Why do governments believe that it is important to control the growth of the money supply?

(ICAP's Official Question Bank for CAF 02 - Q. # 11.1a&b)

LO 5: KEYNES' LIQUIDITY PREFERENCE THEORY:

Liquidity Preference Theory:

"People prefer to hold liquid assets (i.e. cash) rather than illiquid assets (i.e. Bond) to meet their motives. However, people can hold illiquid assets if they are paid interest in return i.e. there is inverse relationship between rate of interest and money demanded".

Motives of Holding Money in Liquid Form:

1. **Transactional motives:**
   People hold money to pay for their day-to-day purchases. This depends on level of income.

2. **Precautionary motives:**
   People hold money to as a precaution for emergency purposes when it might suddenly be needed. Money held for precautionary motives depend on nature of the individual and on the conditions in which he lives.

3. **Speculative motives:**
   People hold money to take advantages of changes in price of bonds. Money held for speculative motives depends on market rate of interest. If market rate of interest is expected to fall, people buy bonds and sell them when price of bond increases.

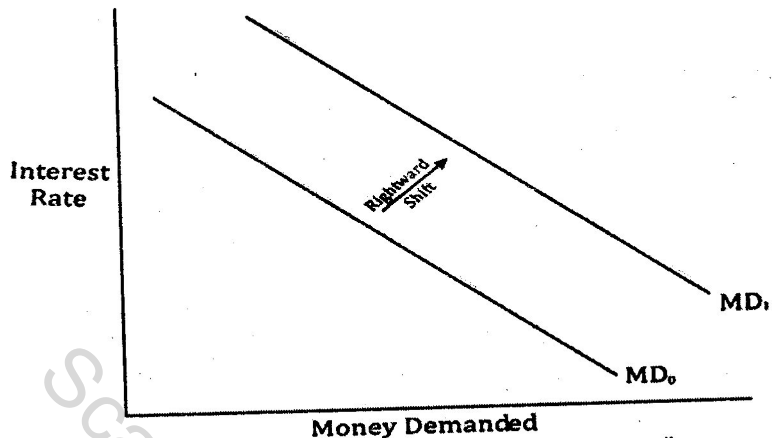
Study Tip - Bond and its Valuation

A **bond** is an instrument in which a person lends money to a corporation or government, for a defined period of time at a fixed rate of interest.

Keynes assumed that wealth can be stored either in cash or bonds, and there is inverse relationship between market interest rate and price of a bond.

Factors affecting demand for money:

Interest Rate: *(Primary determinant)*
If interest rate increases, quantity demanded of money decreases and people hold less money. However, if interest rate decreases, quantity demanded increases and people hold more money.



Money Demanded (MD) curve is also called "Liquidity Preference Curve".

Pace of financial innovation:
Financial innovations (e.g. Debit Card, Credit Card, Electronic payments) bring a new way of spending money. These financial innovations reduce the need to hold money and will cause leftward shift in MD Curve.

Level of GDP:
Increase in economic growth will result in increase in GDP and employment level. Consequently, amount of money demanded will also increase resulting rightward shift in MD Curve.

Level of Prices:
If general price level is increased, demand for money is increased.

CONCEPT REVIEW QUESTION

Q. 9
Briefly explain 'Liquidity preference theory'. Briefly describe the three motives, identified by Keynes which determine an individual's demand for holding money in liquid form. **(07)**
(ICAP, CAF 02 Level – Autumn 2017)

Q. 10
Keynes has identified three different motives on account of which a person prefers to keep his money in liquid form. Identify these motives and describe their influence on the liquidity preference of an individual. **(06)**
(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 11.3b)

Q. 11
According to Keynes, individuals have various motives for retaining their money in liquid form. Identify these motives and explain their influence on the liquidity preference of an individual. **(06)**
(ICAP, CAF 02 Level – Autumn 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 11.6)

Q. 12
An increase in 'GDP' and 'financial innovation' are the two important factors that influence the total demand for money in an economy.
Briefly explain with the help of suitable diagrams, how each of the above factors affects the quantity of money demanded in an economy. **(06)**
(ICAP, CAF 02 Level – Autumn 2014)

PART C - INFLATION

LO 6: DEFINITION, MEASUREMENT, FORMS AND IMPACT OF INFLATION:

Inflation:

Inflation is a continuous or persistent increase in the general price level.

Inflation Rate (%) = (Price Level of Y_1 - Price Level of Y_0)/ Price Level of Y_0 * 100

Suppose price level was 103 in 2016 and 106 in 2017. Then rate of inflation in 2017 is:

$$2.91\% = (106-103)/103 * 100$$

Measurement of Inflation:

The most common way to measure price level for inflation is Consumer Price Index (CPI). CPI measures the changes in prices of a fixed basket of goods and services bought by the typical urban consumer.

Limitations of Consumer Price Index as a measure of inflation:

1. **No full representative of economy:**
   CPI does not take into account full economy. It includes only average basket of goods. Spending habits of poor may be different from rich, or of single person may be different from married persons.

2. **Effect of change in quality of goods and services may distort CPI.**
   Sometimes increase in price comes because of improvement in quality of goods, and not because of inflation. Hence, a superior good may be wrongly classified as inflationary.

3. **Index-number problem**
   It is often debatable as to which year to take as 'base year'.

Forms of Inflation:

1. **Low/Mild inflation:**
   Typically means inflation rate upto 5% annually; considered beneficial.

2. **Moderate inflation:**
   Typical means inflation rate between 5% to 10% annually.

3. **High inflation:**
   Typically means sharp increase in prices and inflation rate more than 50% and even upto 100% annually.

4. **Hyperinflation:**
   Typically means inflation rate more than thousands or even millions percent annually.

5. **Wage-spiral inflation:**
   An increase in general price level due to increase in wage rates is called wage-spiral inflation. Increase in wages causes increase in disposable income of individuals which results in increase in aggregate demand which results in increase in price level.

6. **Deflation/Disinflation:**
   Deflation is a persistent decrease in the general price level i.e. negative inflation rate.

Impact/Costs of Inflation:

1. **Adverse effects on lower class:**
   Higher inflation will have negative effect on lower income and elder classes of society. Particularly if prices of necessities of life are increasing.

2. **Fall in real income:**
   Real income of people is reduced because of high inflation.

3. **Negative real interest rates:**
   If inflation rate exceeds saving rate, pensioners or other persons relying on savings will become poorer.

4. **Cost of borrowing:**
   If inflation rate is high, interest rates are also increased. High interest rate will increase cost of business getting loan and will reduce investment in the country.

5. **Adverse effects on Balance of payments:**
   If prices of goods are increased in domestic market as compared to foreign market, exports of a country will decrease and imports will increase. As a result, the balance of payment will suffer.

6. **Business Uncertainty:**
   In volatile inflation, businessmen are uncertain regarding economic future and they don't start big projects.

CONCEPT REVIEW QUESTION

Q. 13
(a) What do you understand by 'Consumer price index' (CPI)? Also explain how it is calculated. **(04)**
(b) Briefly describe four costs associated with high inflation. **(06)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 14
What is inflation? Briefly state any four harmful effects of inflation on the economy. **(05)**
(ICAP, CAF 02 Level – Spring 2017)

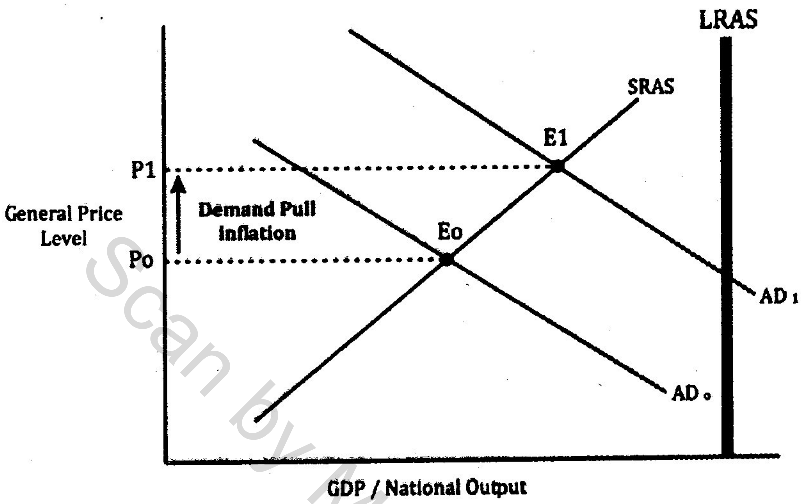
Q. 15
Discuss the concept of Consumer Price Index (CPI). State any three limitations of CPI as a measure of inflation. **(06)**
(ICAP, CAF 02 Level – Autumn 2016)

LO 7: DEMAND-PULL INFLATION, CAUSES AND MEASURES:

Definition of Demand Pull Inflation:

Demand-pull inflation occurs when *AD* rises more rapidly than the economy's productive potential. Demand-pull inflation is generally observed when economy is near full employment level.

Diagram of Demand Pull Inflation:



As AD increases, this shifts AD Curve rightward, hence increasing the price level in the economy.

Causes of Demand Pull Inflation:

- **Fiscal stimulus:**
  Fiscal policies (e.g. decrease in taxes, increase in government spending) alongwith multiplier effect may cause increase in aggregating demand in the country.

- **Monetary stimulus:**
  Monetary policies (e.g. decrease in interest rates) may cause increase in aggregate demand, which would increase price level.

- **Increase in Exports:**
  If other countries purchase from domestic economy, then Aggregate Demand will increase and will shift rightward.

- **Depreciation of the Currency (or Exchange rate):**
  Depreciation in exchange rate increases prices of imports (e.g. oil).

Remedies to Demand Pull Inflation:

Decrease Aggregate Demand by Contractionary Policies i.e.

Contractionary Fiscal Policies:

- Increase indirect taxes (e.g. Value Added Tax) to discourage spending.
- Decrease government spending and transfer payments

Contractionary Monetary Policies:

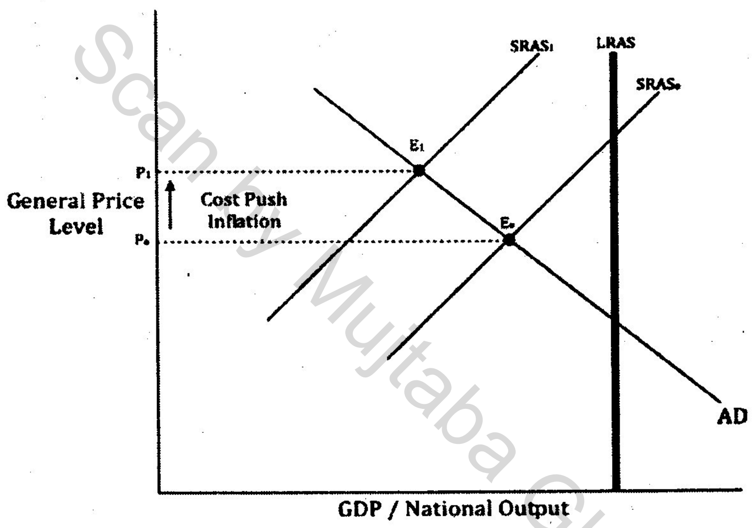
- Reduce money supply to reduce ability of people to make transactions.
- Increase interest rates to make cost of borrowing high.
- Increase reserve ratio so that bankers' lending power is reduced.
- Selling government securities.

LO 8: COST-PUSH INFLATION, CAUSES AND MEASURES:

Definition of Cost Push Inflation:

Cost-push inflation occurs when there is persistent increase in the cost of production of goods, while their demand remains consistent. GDP and employment tends to fall in cost push inflation.

Diagram of Cost-push inflation:



As cost increases, this shifts SRAS Curve leftward, hence increasing the price level in the economy.

Causes of Cost-push inflation:

- **Increase in cost of factors of production:**
  An increase in the price of raw material, labor and other inputs increases cost of production. Therefore, supply is decreased.

- **Increase in indirect taxes:**
  Increased duties on fuel or electricity will increase cost of production and will decrease aggregate supply.

- **Wage-Price Spiral:**
  Expectations of inflation by workers will cause workers to demand higher wages. Increase in wages will increase prices, which will lead to another expectation of inflation by workers and so on.

- **Depreciation of the Currency (or Exchange rate):**
  Depreciation in exchange rate increases prices of foreign goods. Hence, it increases cost of imported raw material which cause decrease in aggregate supply.

- **Increase in prices of imports (e.g. oil and petroleum):**
  Increases in cost of imported raw material will cause decrease in aggregate supply.

Remedies to Cost Push Inflation:

Increase Aggregate Supply by controlling cost of inputs i.e.

- **Limit wage increases:**
  Wages should be kept low to reduce upward pressure on prices.

- **Limit cost of utilities :**
  Government can reduce cost of utilities (e.g. energy) to reduce inflation.

- **Appreciation of the Currency (or Exchange rate):**
  Government can appreciate its currency (in relation to country it is importing from) to reduce cost of imported material.

CONCEPT REVIEW QUESTION

Q. 16

Differentiate between Demand Pull and Cost Push Inflation. **(04)**

(PIPFA – Winter 2016)

Q. 17

(a) PAKLAND economy is facing Cost Push Inflation. Make a diagram that reflects its situation. **(04)**

(b) What measures you will suggest to PAKLAND economy to impart control over cost push inflation? **(06)**

(PIPFA – Winter 2017)

Q. 18

Explain briefly the concepts of Demand-pull inflation and Cost-push inflation. **(04)**

(ICAP, CAF 02 Level – Spring 2010)

(ICAP's Official Question Bank for CAF 02 – Q. # 9.2b)

Q. 19

Briefly discuss any two causes each of 'Cost-push inflation' and 'Demand-pull inflation'. **(06)**

(ICAP, CAF 02 Level – Autumn 2017)

Q. 20

Briefly discuss any two measures that may be adopted for controlling inflation if an economy is facing:

- cost-push inflation
- demand-pull inflation **(04)**

(ICAP, CAF 02 Level – Autumn 2016)

LO 9: QUANTITY THEORY OF MONEY:

Quantity Theory of Money:

Quantity theory of money:

Money supply does not have any effect on output or employment. If money supply is increased, so will be the price level.

This theory was expressed by Fisher in the form of following equation:

M (i.e. Money supply) * **V** (i.e. Velocity of money) = **P** (i.e. Price level) * **Y** (i.e. National Output)

Assumptions of the Theory:

1. Velocity (V) of money is constant.
2. Economy is at full employment level, hence output (Y) is fixed at that level.

Explanation/Implication/Rationale of the Theory:
If supply of money is increased, individuals will spend excess money on goods and services. As economy is already at full capacity, excess spending will cause increase in price level.

Therefore, if government wants to control price level, it should control growth of money supply.

Controlling the Supply of Money:
The ultimate control of the money supply lies with a country's central bank which can control money supply by following methods:

1. Open Market Operations
2. Reserve requirements
3. Discount Rate/Base Rate
4. Moral Persuasion
5. Exchange Rates

(These methods will be discussed in detail later in the concept of "Monetary Policies")

CONCEPT REVIEW QUESTION

Q. 21
Briefly explain the 'Quantity Theory of Money'. **(03)**
(ICAP, CAF 02 Level – Spring 2015)

Q. 22
Briefly describe the 'Quantity theory of money'. **(03)**
(ICAP, CAF 02 Level- Spring 2019)

Q. 23
Describe the methods by which the government can attempt to control the money supply.
(ICAP's Official Question Bank for CAF 02 – Q. # 11.1c)

Q. 24
Compute the velocity of circulation of money in an economy using the Quantity Theory of Money, where the average price level is 1.8, real GDP is Rs. 28,726 billion and the nominal money supply is Rs. 12,926 billion. **(02)**
(ICAP, CAF 02 Level – Spring 2017)

Q. 25
What are the tools available to the central bank of a country for controlling the supply of money in the economy? **(06)**
(ICAP, CAF 02 Level – Spring 2006)

PART D – UNEMPLOYMENT

LO 10: UNEMPLOYMENT, ITS TYPES AND MEASURES:

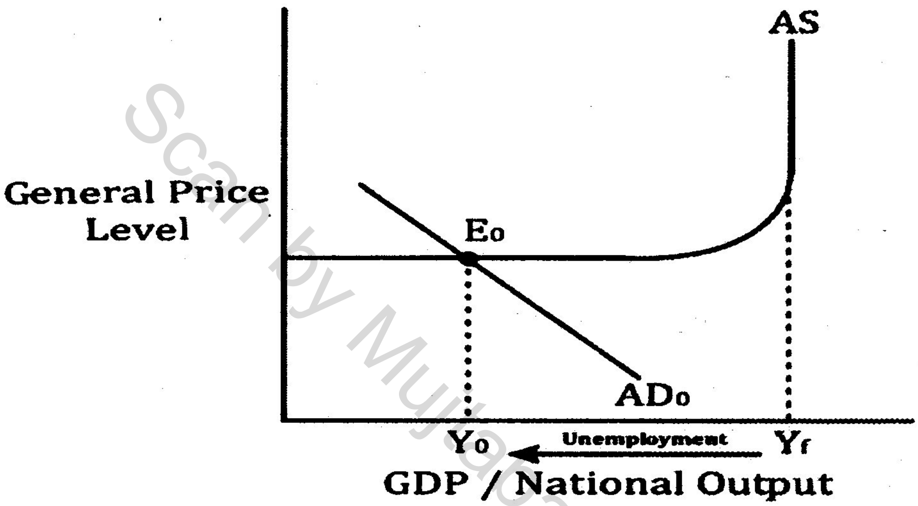
Unemployment:

Unemployment means being without employment and actively searching for work.

Types of Unemployment:

Demand Deficient/Cyclic Unemployment:

Such unemployment occurs in recession due to decrease in aggregate demand as compared to potential output e.g. in recession, firms cut-back their production and reduce labor.



Frictional unemployment:

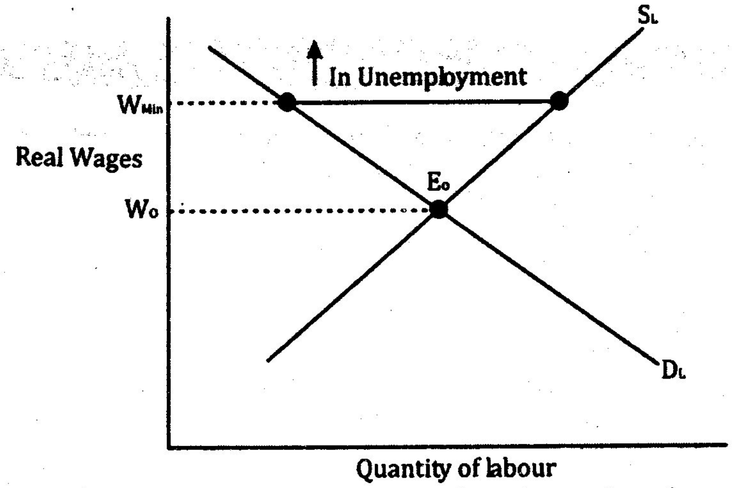
Unemployment when people are moving from one job to another. This occurs when there is a shortage of a particular type of workers at one place and similar type of workers are in surplus at some other place. This is short-term unemployment.

Structural Unemployment:

Unemployment due to mismatch between the skills required by employers and skills possessed by workers. It arises because of inefficiencies in the labour market when an economy goes through structural long-term changes.

Real Wage/Classical Unemployment:

Such unemployment occurs when minimum wages are set higher than equilibrium wages (e.g. by govt. or by labor unions). Demand for labor will be less because firms cannot afford to employ all available work force at such higher rate.



Therefore, there should be no minimum wages, so that demand and supply reaches market equilibrium.

Exam Tip

Unemployment can be **Voluntary** (people choose not to work at the prevailing wage rate) or **involuntary** (people want to work at prevailing wage rate but cannot find work).

Measures/Policies to reduce unemployment:

Education and Training:

Government should provide technical education and training to workers to acquire new skills. This process may take enough time but it reduces unemployment permanently.

Develop a culture of entrepreneurship:

Government should start outreach program with the help of advisors and should prepare youth to think about entrepreneurship. For this purpose, government can provide technical supports (e.g. feasibility studies) as well as financial supports (e.g. loan or infrastructure at subsidized rates).

Financial Assistance:

Government can provide subsidies, grant and tax exemptions to industries (generally or at particular area) to reduce unemployment. Govt. should also provide assistance to workers to move to different locations.

Maintaining Database:

Government should maintain database of unemployed people and should provide information to them on available vacancies.

CONCEPT REVIEW QUESTION

Q. 26

(a) Define Unemployment. **(02)**

(b) Pakistan is facing mass unemployment. Suggest some measures to reduce unemployment to the decision makers of Pakistan. **(08)**

(PIPFA – Summer 2017)

Q. 27

Identify and briefly describe various types of Unemployment. **(12)**

(ICAP, CAF 02 Level – Spring 2011)

(ICAP's Official Question Bank for CAF 02 – Q. # 11.4c)

Q. 28
Distinguish between frictional, structural, and cyclical unemployment.
(ICMA Pakistan – Summer 2013)

Q. 29
Describe the type of unemployment that is generally observed during a period of recession in an economy. (02)
(ICAP, CAF 02 Level – Spring 2016)

PART E – PHILLIPS CURVE

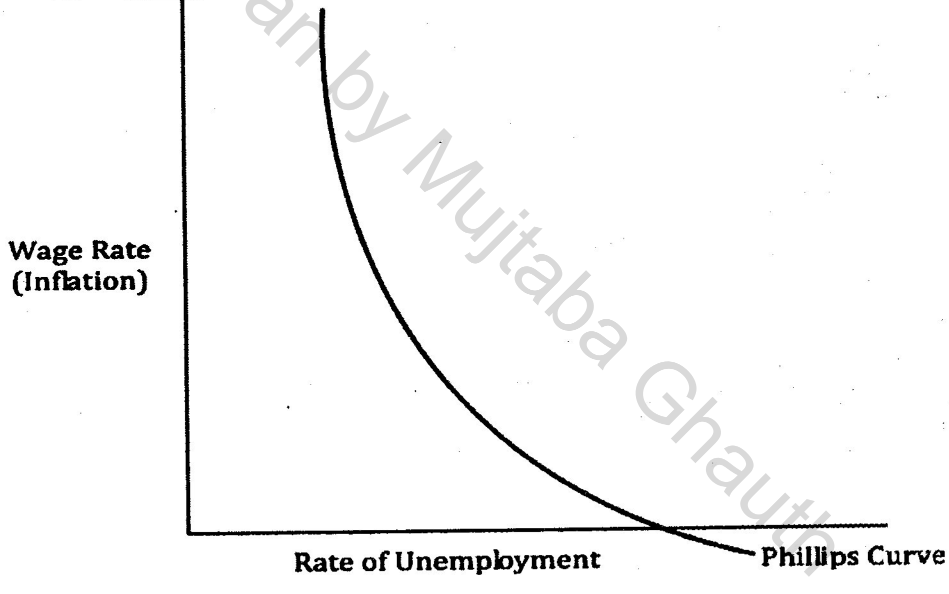
LO 11: PHILLIPS CURVE:

Phillips Curve:

Phillips Curve is a graphical presentation which shows inverse relationship between unemployment and wage/inflation rate i.e.

- If unemployment decreases, wage rate increases.
- If unemployment increases, wage rate decreases.

Diagram and Explanation:



Explanation of Trade-off between Inflation and Unemployment in Short-run:

If unemployment falls, there will be shortage of labor and wage rate will go high (because labor will have bargaining power).

If unemployment increases, there will be surplus of labor and wage rate will go down.

CONCEPT REVIEW QUESTION

Q. 30
Define Phillips Curve. Explain the trade-off between unemployment and wage inflation with the help of a Phillips Curve. (08)
(ICAP, CAF 02 Level – Spring 2016)

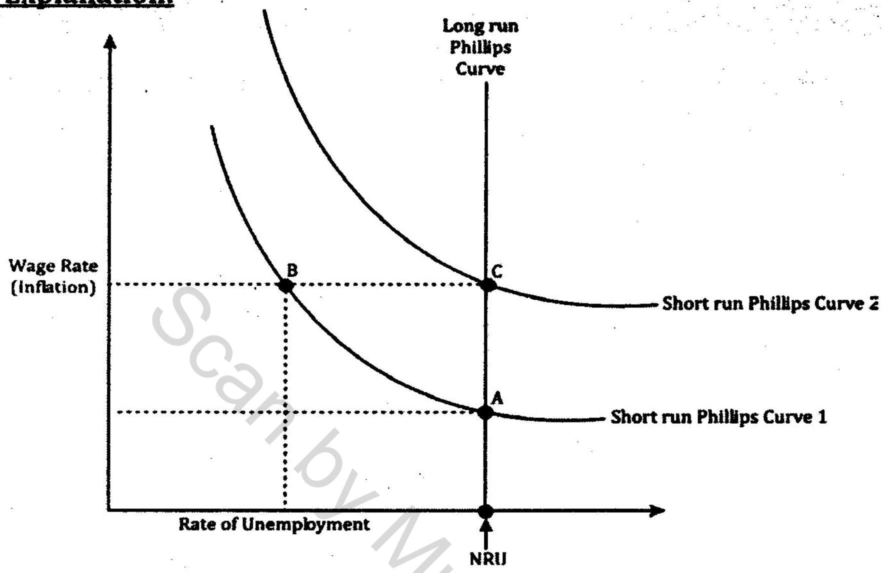
Q. 31
Explain the relationship between Inflation and Unemployment with the help of a Phillips Curve. (06)
(ICAP, CAF 02 Level – Spring 2011)
(ICAP's Official Question Bank for CAF 02 – Q. # 11.4a)

LO 12: LONG-RUN PHILLIPS CURVE:

Long-Run Phillips Curve:

Monetarist Economist (Milton Friedman) suggested that there is a trade-off between unemployment and inflation in the short run, but not in the long run.

Diagram and Explanation:



Why is there no trade-off between Unemployment and Inflation in Long-run:

1. Suppose there is high level of unemployment and wage level is low (Point A).
2. If government increases Aggregate Demand, this will cause decrease in unemployment and increase in wage rate inflation (Point B).
3. Friedman said that, after some time, prices of goods will also go up to cover wage increase. Workers will ultimately realize that, because of unexpected increase in inflation, their real wages are lower. Therefore, some workers will quit job. This will shift Phillips curve at higher point i.e. to a point where unemployment is again at previous level but inflation is now at higher level. (Point C)

Exam Tip - Stagflation

Stagflation means high unemployment in periods of high inflation.

CONCEPT REVIEW QUESTION

Q. 32

According to the monetary economist Milton Friedman, a trade-off exists between unemployment and wage inflation but only in the short-run. In the long-run, no such trade-off exists.
Explain, with the help of a diagram, the arguments put forward by Friedman in this regard. **(06)**

(ICAP, CAF 02 Level – Spring 2018)

Q. 33

(a) Explain the trade-off between inflation and unemployment in an economy. Why, at low unemployment is inflation likely to be higher, and vice versa?
(b) Draw this relationship, in the style of a Phillips Curve.
(c) Economist Milton Friedman agreed that such a relationship existed, however argued that in the long run, no trade-off between inflation and unemployment existed. Explain this with the aid of a diagram.

(ICAP's Official Question Bank for CAF 02 – Q. # 11.5)

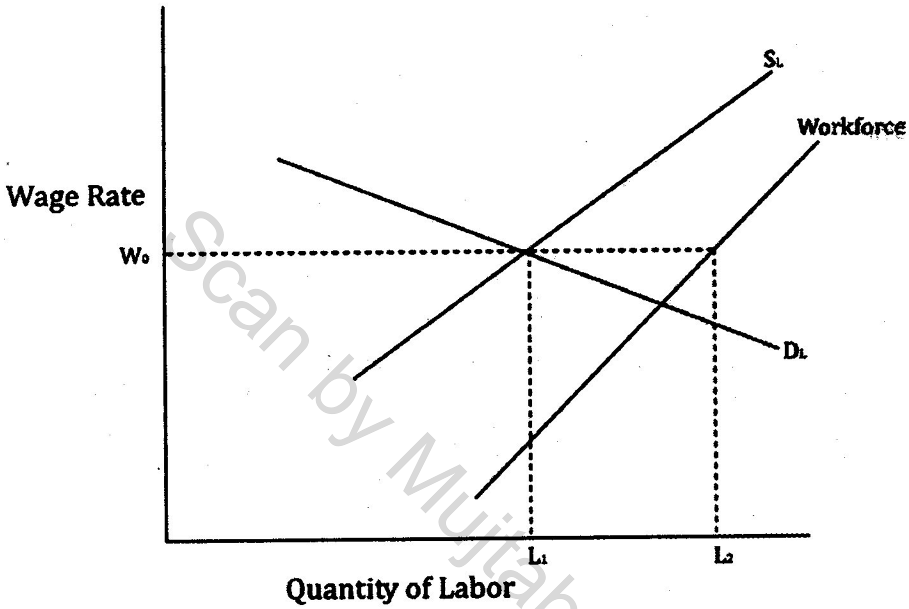
LO 13: NATURAL RATE OF UNEMPLOYMENT:

Definition of Natural Rate of Unemployment (NRU)

Natural Rate of Unemployment (a type of voluntary unemployment) is the level of unemployment that is expected to prevail in economy in long run. It occurs when cyclical unemployment is zero i.e.

NRU = Frictional Unemployment + Structural Unemployment

Diagram and Explanation:



What is Natural Rate of Unemployment:

Difference between L_1 (workers currently working at current wage rate) and L_2 (total workforce available in market) represents level of natural rate of unemployment.

Why Supply Curves of labor and total workforce converge:

Because, at a higher wage, more of the voluntarily unemployed workforce will choose to work.

Exam Tip – Full Employment

Full employment is the situation where all available Labor force and other factors of production are fully utilized in an economy. It does not mean zero unemployment because there will always be a "natural rate of unemployment".

CONCEPT REVIEW QUESTION

Q. 34

Explain the concept of 'Natural rate of unemployment' with the help of a diagram. **(05)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 35

Full Employment is achieved when the rate of Unemployment reaches zero. Discuss.

(ICAP, CAF 02 Level – Spring 2011)

(ICAP's Official Question Bank for CAF 02 – Q. # 11.4b)

CHAPTER TWELVE

MONETARY POLICY

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A – BANKS			
LO 1	CENTRAL BANK AND ITS FUNCTIONS	12.2.1, 12.2.2	12.2
LO 2	TYPES OF BANKS	12.3.1, 12.3.2	12.1a, 12.5a, 13.3a
LO 3	INTEREST RATE AND ITS DETERMINANTS	12.1.1, 12.1.2, 12.1.3	N/A
PART B – MONETARY POLICY			
LO 4	MONETARY POLICY AND ITS TOOLS	12.2.3, 12.2.4, 12.2.5	12.7, 12.8, 12.9, 14.9
LO 5	OBJECTIVES, CONFLICTS AND LIMITATIONS OF MONETARY POLICY	12.2.6, 12.2.7, 9.2.5	12.6
LO 6	LIQUIDITY TRAP	11.3.6	N/A

*** October 2016 Edition*

PART A – BANKS

LO 1: CENTRAL BANK AND ITS FUNCTIONS:

Central Bank:

Central bank is the entity responsible for overseeing the overall monetary policy in a country. It is also concerned with meeting a number of other objectives e.g. currency stability (i.e. exchange rate stability), price stability (i.e. low inflation), economic growth, full employment and credit control.

Functions of Central Bank:

Sole supplier of currency:

The central bank has the responsibility of supplying the notes and coins throughout a country. It also exercises greater control over it.

Banker to the Govt.:

It offers advice on public debts of country and also provides funding for governments looking to fund projects, in the same way a commercial bank would to its customers.

Banker to the banks:

By holding cash reserves from each bank for safe keeping, the central bank brings a level of protection to the banks.

Further, a central bank can offer a counselling service to commercial banks if ever they find themselves in financial difficulty, and in need of advice.

Lender of the last resort:

If a commercial bank is unable to use other sources to meet its financial requirements then they use the central bank. This brings greater liquidity to the system, and helps protect savers' deposits.

Exchange Rate Controls:

The central bank can control exchange rates by buying and selling foreign currencies.

Controller of Credit:

Central bank controls level of credit in a country via monetary policy.

Clearing agent for banks

As all commercial banks have accounts with the central bank, when undertaking transactions with each other, they can do so within the central bank, reducing the necessity of transferring cash.

Establishes specialized banks

In some cases, a central bank will allow the creation of banks to serve a particular purpose. For example, a bank that organises the funds for agricultural workers, or another sector of the economy.

> **Study Tip - Monetary union (or Currency Union)**
> The decision of the countries to adopt a common currency and to operate under same central bank. An example is European Union (EU) which comprises 28 member states sharing Euro as common currency.

CONCEPT REVIEW QUESTION

Q. 1
Identify any eight functions of a central bank. **(04)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 2
Write notes on the role of State Bank of Pakistan as banker to the Government. **(02)**
(ICAP, CAF 02 Level – Spring 2005)

Q. 3
(a) How does State Bank act as a lender of the last resort? **(02)**
(b) Briefly state the role of State Bank as 'Controller of Credit'. **(02)**
(ICAP, CAF 02 Level – Autumn 2005)

Q. 4
(a) Describe the role of a central bank when it acts as 'banker to the banks and banker to the government'.
(b) Describe the main features of the 'supervision of the banking system' undertaken by a central bank or by a regulatory authority.
(ICAP's Official Question Bank for CAF 02 – Q. # 12.2)

LO 2: TYPES OF BANKS:

Financial Intermediaries:

A financial intermediary is a financial institution through which savers can indirectly provide funds to the borrowers e.g. banks, mutual funds and pension funds.

The process of collecting funds from savers and disbursing to borrowers is called financial intermediation.

Bank (or Commercial Bank):

Bank is a financial institution licensed to perform various financial services (or functions) within an economy e.g. ①Accepting deposits, ②Advancing money, ③Credit creation, ④Investment services, and ⑤ Other general finance services services.

Within the scope of commercial banks, there are different types of banks e.g.:

- **Investment banks:**
  Investment bank does not accept deposits. Investment banks assists institutions in raising capital and also provides services of underwriting their securities. They also advise on many issues which a business may face.

- **Specialized Banks:**
  A bank which targets a specific section of the economy. Customers can have specialized forms of banking services.
  For example, Agricultural Development Bank of Pakistan provides loan to agriculturalists to purchase land or other inputs.

- **Retail banks**
  This bank deals with deposits and loans from large businesses and corporations.

- **Cooperative banks/building society/credit union.**
  These are usually a not-for-profit organization, that provides banking and other financial services to its members. Members pool their resources and receive favourable credit terms. Membership is restricted to some shared alliance.

Mutual funds:

- This is an investment scheme in which various investors pool their money which is then invested in a variety of financial instruments.
- These funds are operated by professional money managers who have specialist knowledge of the money, and capital markets
- The main advantage of a mutual fund is that it gives individual investors access to the market. Further, its portfolio can be diversified including range of securities.
- Mutual funds' own share can be purchased/sold at Net Asset Value of the fund.

CONCEPT REVIEW QUESTION

Q. 5
Define Financial Intermediaries. **(02)**
(PIPFA – Winter 2016)

Q. 6
What is meant by Financial Intermediation?
(ICAP, CAF 02 Level – Spring 2010)
(ICAP's Official Question Bank for CAF 02 – Q. # 12.1a)

Q. 7
What do you understand by the term 'Bank'? Briefly describe the following:
(i) Retail bank (ii) Specialized bank (iii) Investment bank **(06)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 8
Briefly discuss the main features of mutual funds. **(2.5)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 9
Describe the main advantages of investing through mutual funds. **(02)**
(ICAP, CAF 02 Level – Autumn 2006)

LO 3: INTEREST RATE AND ITS DETERMINANTS:

Definition:
Interest rates are the price of borrowing money. It is the amount charged by a lender to a borrower on the amount borrowed.
Interest rates are expressed as a percentage of principal.

Types:

Nominal Interest Rate:
Nominal interest rate is the interest rate which is stated on a bond or borrowing. Nominal interest rate is the rate before adjustment of inflation.

Real Interest Rate:
The real interest rate is the rate of interest that is after adjustment of inflation. For example if the nominal interest rate on a loan is 10%, and the inflation rate is 6% then the real interest rate is 4%.

Determinants of Interest Rate:

Demand of Money and Supply of Credit Money:
Interest rate is the price for credit money. Like any other product, interest rate is determined by interaction of demand of money and supply of credit money. If demand of credit money increases, interest rate increases (and vice-versa). If supply of credit money is increased, interest rate decreases (and vice-versa).

Inflation Rate:
To produce positive returns, interest rates are always kept above inflation rate. Therefore, if inflation rate increases, interest rate shall also increase.

Monetary Policies:
Central bank influences interest rates by implementing monetary policy.

Balance of Payment:
If a country has continuous deficit in balance of payment and is in need of more funds, it may increase rate of interest to attract foreign investors.

Other factors:
Interest rate is also affected by other multiple factors e.g. type of loan, credit rating, credit risk, type of security, and duration of loan.

CONCEPT REVIEW QUESTION

Q. 10
Illustrate the concepts of 'Nominal interest rate' and 'Real interest rate'. **(05)**
(ICAP, CAF 02 Level – Spring 2017)

Q. 11
In an economy, nominal interest rate is 6% and inflation rate is 4%. What would be the exact real interest rate in that economy? **(02)**
(ICMA Pakistan – Summer 2012)

Q. 12
Elaborate the main factors that affect the general rate of interest in an economy. **(05)**
(ICAP, CAF 02 Level – Spring 2007)

PART B – MONETARY POLICY

LO 4: MONETARY POLICY AND ITS TOOLS:

Definition of Monetary Policy:
Monetary policy means using variety of tools to influence the use of money and credit within an economy to meet certain objectives.

Study Tip – Expansionary and Contractionary Policies
When central bank uses monetary policy to increase Aggregate Demand, this is called Expansionary Policy.
When central bank uses monetary policy to decrease Aggregate Demand, this is called Contractionary Policy.

Tools of Monetary Policy:
Open Market Operations:
Open market operations means the sale and purchase of government securities by the central bank in the open market

If central bank wants to increase aggregate demand, it will buy government securities from dealers and commercial banks in the market. In return, central banks pays them which increases the supply of money in market. As cash in hand of commercial banks increase, their ability to create money increases (magnified by effect of multiplier). Hence, aggregate demand in economy increases.

Reserve requirements:
On directions of central bank, commercial banks have to keep a certain percentage of their deposits as reserve.

If central bank wants to increase aggregate demand, it will decrease the reserve ration which is required to be kept by commercial banks. If this reserve is decreased, commercial banks will have more money to increase the level of loans that they give out to public. Credit multiplier will further magnify this effect. Money supply will increase and aggregate demand will also increase in economy.

Discount Rate (or Base Rate) Policy:
Central bank makes loan to commercial bank. Discount rate is the rate which is charged by central bank on loans given to commercial banks.

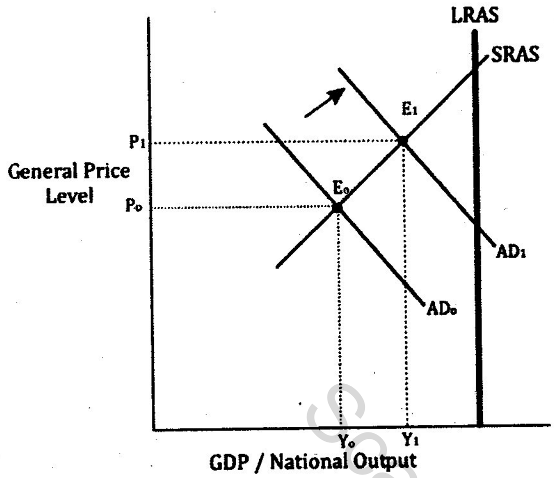
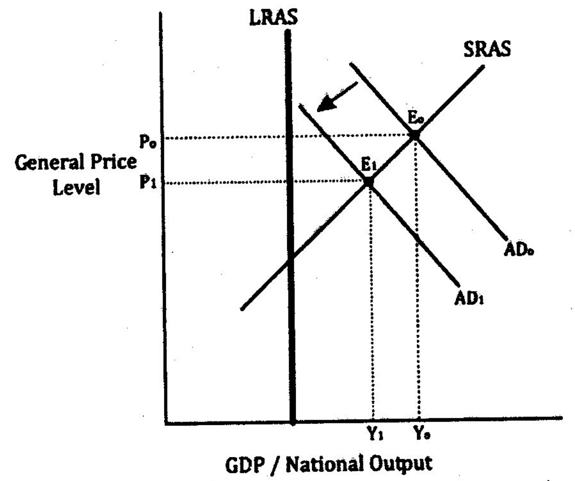
If central bank wants to increase aggregate demand, it will decrease the discount rate. Commercial banks will be encouraged to borrow more. This borrowing increases their reserves and commercial banks have more money to lend to general public. Further, if discount rate is decreased, interest rates charged by commercial banks are also expected to decrease. Consumers and firms will borrow more at reduced rates, which will increase money supply and aggregate demand in economy.

Moral Persuasion:
Central bank can morally persuade commercial banks to take specific steps that are consistent with the central bank's macroeconomic objectives. This can be done through personal discussion and by issuing non-obligatory directives.

Although, this is not an easy instrument, however it is still an important one.

Exchange Rates:
Central bank can buy or sell foreign currencies to ensure that exchange rate does not adversely affect the economy.

Study Tip
Under Contractionary Policies, same tools will be used in opposite direction to decrease aggregate demand.

Diagram showing effect of Expansionary Policy on AD, Output, Employment and Inflation	Diagram showing effect of Contractionary Policy on AD, Output, Employment and Inflation
	

CONCEPT REVIEW QUESTION

Q. 13

To achieve economic policy objectives, the government has a vital economic role in building the necessary infrastructure, ensuring the availability of adequate financing facilities, moulding the social structure and adapting the legal framework to the tasks of development.

(a) List down the main objectives of the economic policies of a government. **(06)**

(b) Briefly discuss the policy tools usually adopted by the government to achieve these objectives. **(06)**

(ICAP, CAF 02 Level – Spring 2009)

(ICAP's Official Question Bank for CAF 02 – Q. # 9.7)

Q. 14

Briefly describe how the level of aggregate demand may reduce when a central bank changes the reserve requirements for commercial banks. **(05)**

(ICAP, CAF 02 Level- Spring 2019)

Q. 15

List any four tools that a central bank may use to implement its monetary policy. **(02)**

(ICAP, CAF 02 Level – Autumn 2014)

Q. 16

Define Expansionary and Contractionary Monetary Policy. **(04)**

(PIPFA – Summer 2017)

Q. 17

A country named Greenland wishes to increase economic growth. Which type of monetary policy will be formulated by its Central Bank to achieve this objective? How this policy will affect the aggregate demand and output level? Illustrate your explanation with suitable diagram. **(10)**

(PIPFA – Winter 2015)

Q. 18

Briefly explain the following instruments of Monetary Policy:

(i) Open Market Operation **(02)**

(ii) Reserve Ratio **(02)**

(PIPFA – Summer 2016)

Q. 19

Suppose a central bank is looking to reign in the level of aggregate demand in an economy through tightening the money supply. There are a number of options available to them. Talk through how the following policies would look to achieve this:

(a) Reducing the level of reserves of commercial banks.

(b) Moral persuasion.

(ICAP's Official Question Bank for CAF 02 – Q. # 12.7)

Q. 20

Suppose a central bank is looking to increase the level of aggregate demand in an economy through expanding the money supply. Talk through how the following policies would look to achieve this:
(a) Open-Market Operations.
(b) Discount-rate policy.

(ICAP's Official Question Bank for CAF 02 – Q. # 12.8)

Q. 21

Explain how the central banks are able to reduce the level of aggregate demand in an economy by changing the reserve requirements of commercial banks?

(ICAP, CAF 02 Level – Autumn 2016)

Q. 22

What do we mean by 'Open Market Operations'? Why does the Central Bank undertake such operations? **(04)**

(ICAP, CAF 02 Level – Spring 2008)
(ICAP's Official Question Bank for CAF 02 – Q. # 14.9)

Q. 23

Illustrate the process through which the central bank may reduce the level of aggregate demand in the economy using open market operations. **(05)**

(ICAP, CAF 02 Level – Spring 2017)

Q. 24

(a) Complete the following sentence: In general, monetary policy is undertaken by "government/ the central bank/ commercial banks/ industrial bodies" and fiscal policy is undertaken by "government/ the central bank/ commercial banks/ industrial bodies".
(b) Show, with the aid of a neo-classical aggregate supply diagram, how monetary and fiscal policy can work together to increase the level of output in an economy during a recession without increasing the price level.

(ICAP's Official Question Bank for CAF 02 – Q. # 12.9)

LO 5: OBJECTIVES, CONFLICTS AND LIMITATIONS OF MONETARY POLICY:

Objectives of Monetary Policy:

Economic Growth:
Economic growth means an increase in GDP of a nation over time. This will increase the wealth of the country and standard of living of people.

Full employment:
Central bank has social objective to achieve full employment level:
- to ensure maximum utilization of human resources and increase national output, and
- to reduce crimes, or social security payments as a result of unemployment.

Price Stability:
Central bank ensures that there low inflation ensuring stability in prices and economic performance.

Exchange rate stability:
Central bank also ensures stable exchange rate so that balance of payments is not adversely affected.

Credit Control:
Central bank exercises control over issuance of credit through monetary policy.

Conflict between Objectives:

Macroeconomic objectives of a government may be in conflict with each other. Therefore, government should prioritize and balance its objectives to achieve a good combination. For example, following conflicts may exist between various objectives of Macroeconomics.

Price stability versus full employment:

There is an inverse relationship between inflation and unemployment. Therefore, if central bank increases aggregate demand to reduce unemployment, it may also result in inflation.

Economic growth versus credit control:

Economy may grow through the expansion of credit, as it would stimulate investment and spending. However, there would be a risk of bad debts.

Exchange rate stability versus Economic growth:

To boost economic growth, central bank may decide to depreciate local currency to increase its exports and to achieve economic growth. However, such act would cause instability in exchange rates.

Limitations of Monetary Policies:

Existence of non-monetary sector:

Usually, people in developing countries and in rural areas do not use banking channel or money for their transactions. Monetary policies cannot cover such non-monetary sector (e.g. barter transactions) existing in the economy.

Existence of non-banking financial institutions:

These are some organizations which provide finance to consumers and investors, but do not come under supervision of central bank. Monetary policies cannot cover such non-banking financial institutions.

Agents using own liquid money:

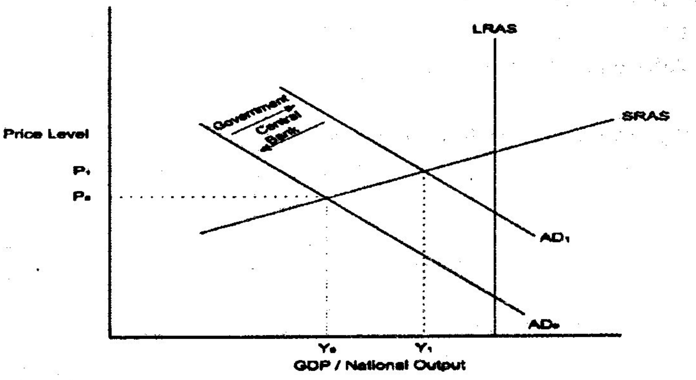
When a central bank reduces supply of money, economic agents can create their own liquid money against policies of central bank (e.g. Bill of Exchange, Promissory Note).

Time-lag:

There may be considerable time-lag between planning a monetary policy and implementing it. A change in monetary policy may take months to affect an economy.

Lack of co-ordination between monetary and fiscal policies:

Strictly speaking, monetary policy is implemented by central bank and fiscal policy is implemented by government. If both organizations do not work in co-ordination with each other, both policies may fail.



Conflict in objectives:
Some objectives of monetary policy may be in conflict with other objectives.

Liquidity Trap:
Monetary policy becomes ineffective when economy is in Liquidity trap.

CONCEPT REVIEW QUESTION

Q. 25
Monetary policy can play a vital role in influencing the use of money and credit within an economy in order to achieve certain objectives.
Briefly discuss objectives of monetary policy and how these objectives can be achieved. (05)
(ICAP, CAF 02 Level-Autumn 2018)

Q. 26
(a) What are the main objectives of a Central Bank?
(b) Is it possible for a Central Bank to meet all of these objectives? Explain your answer.
(ICAP's Official Question Bank for CAF 02 – Q. # 12.6)

Q. 27
'Central bank uses monetary policy to achieve number of objectives in an economy. However, due to conflicting situations, it is not possible to achieve all of these objectives at once'.
Briefly describe any two conflicts which may exist between these objectives. (04)
(ICAP, CAF 02 Level - Autumn 2017)

Q. 28
Monetary policy may bring about many advantages but in the real economy, there are certain limitations to its effectiveness. Discuss any four such limitations. (04)
(ICAP, CAF 02 Level - Autumn 2015)

LO 6: LIQUIDITY TRAP:

Liquidity Trap:
Liquidity trap is a situation when prevailing interest rates are too low (in recession). Households and businesses take it as indication of unhealthy economy. They downgrade expectations of future prospects and decide to store cash. Thus, monetary policy by central bank fails to stimulate economic growth.

Overcoming the Liquidity Trap:
- **Fiscal Policy:**
  To increase aggregate demand, Government itself should spend/invest more by running a budget deficit.

- **Developing expectations for higher prices in future:**
  Expectations of higher inflation will cause savings to be worth less, as its real value will decrease. Therefore consumption will increase.

- **Developing expectations for low interest rates:**
  If central bank convinces people that interest rates will stay low, they will increase present spending.

CONCEPT REVIEW QUESTION

Q. 29

What is meant by 'Keynesian liquidity trap'? Identify any two policies which may help in breaking out of the liquidity trap. **(03)**

(ICAP, CAF 02 Level - Autumn 2017)

CHAPTER THIRTEEN

CREDIT

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
LO 1	DEFINITION, TYPES, ADVANTAGES AND DISADVANTAGES OF CREDIT	11.2.6, 13.1.2, 13.1.3,	N/A
LO 2	DEFINITION, ADVANTAGES AND DISADVANTAGES OF CREDIT MONEY	11.2.6, 13.1.3	13.1c
LO 3	PROCESS OF CREDIT CREATION	13.1.4	13.3bi, 12.1b
LO 4	LIMITATIONS OF CREDIT CREATION	13.1.6	13.1d, 13.2 a&b, 13.3bii, 12.5b
LO 5	MONEY MULTIPLIER	13.1.5	N/A

*** October 2016 Edition*

LO 1: DEFINITION, TYPES, ADVANTAGES AND DISADVANTAGES OF CREDIT:

Definition of Credit:

A contractual agreement through which a borrower receives something of value in the present, in exchange for payment in the future, generally with interest.

Another related concept is 'maturity' which means period for which credit remains outstanding.

Types of Credit:

1. **Bank credit:**
   Between a bank and an individual whereby bank gives money to an individual against a security and receives its money back in accordance with terms of credit.

2. **Trade credit:**
   Between a customer and a seller in commercial sector, whereby a purchaser receives the goods now and pay for them after some credit period e.g. 30 days or 60 days.

3. **Consumer Credit:**
   Usually between a retailer and consumer in which amount of credit is used by consumer on purchase of goods/services.

Advantages of Credit:

- Allows immediate consumption,
- Generates higher revenue for firms.

Disadvantages of Credit:

- Risk of bad debt,
- Difficult to establish trust between parties.

LO 2: DEFINITION, ADVANTAGES AND DISADVANTAGES OF CREDIT MONEY:

Credit Money (or Bank Money):

Credit money is any future monetary claim against a person that can be used to buy goods and services.

Credit money means money which is not in cash (currency or coins) form. Every financial instrument which cannot be paid immediately is called credit money e.g. Bonds.

Advantages of Credit Money:

1. **Government:**
   Credit money helps government in making payments to perform its functions.

2. **Industrial Revolution:**
   Concept of Credit money is used in valuation of assets and in calculation of present value and future value of assets and liabilities. It allows firms to invest, expand and generate future revenues.

3. **Basis of Keynes Liquidity Preference Theory:**
   Level of credit money in a country influences interest rate.

4. **Interbank transactions:**
   Credit money has made easy the settlement of accounts between banks.

5. **Working of banks and financial institutions:**
   Credit money is a basis for the functions and operations of banks and financial intuitions. A basic function of commercial banks is to create money through credit creation process.

6. **Economic Policies:**
   Through increasing or decreasing interest rate, government can control credit money and hence economic policies can be implemented by government.

7. **Spending and consumption Habit:**
   Credit money can be used to control spending habits of individuals.

Disadvantages of Credit Money:

1. **Inflation Problems:**
   Credit money leads to credit creation process, which increases money supply in the country and may cause inflation.

2. **Creation of Monopolies:**
   Commercial banks usually give credit money to large scale companies due to their strong financial position. This may lead to creation of monopolies.

3. **Economic Instability:**
   Excess credit creation may cause over investment and instability in economy.

4. **Unproductive loan:**
   Easy availability of credit money turns into unproductive loan which is wastage of credit money.

CONCEPT REVIEW QUESTION

Q. 1
What is 'Credit money'? Give two advantages and disadvantages of credit money. **(06)**
(ICAP, CAF 02 Level – Autumn 2017)

Q. 2
State two advantages and two disadvantages of credit money. **(04)**
(ICAP, CAF 02 Level- Spring 2019)

LO 3: PROCESS OF CREDIT CREATION:

Credit Creation/Credit Money Creation:

The most important function of a commercial bank is the creation of credit. Commercial banks accept deposits and create credit by advancing loans. However, commercial banks cannot use the entire amount of deposits for lending purposes. They are required to keep a certain percentage of deposits as reserve for immediate delivery to depositors (called Reserve Ratio).

How Process of Credit Creation works – An Example:

Assume reserve ratio in an economy is 40% which means Credit/Money Multiplier is 2.5 (= 1/0.4). Further, assume that Rs. 1,000 is deposited in the bank A.

1. Bank A will keep Rs. 400 with itself and will lend Rs. 600 to another person.
2. Another person receiving the loan amounting Rs. 600 will ultimately deposit it again in a bank. Now that other bank can keep reserves of Rs. 240 (i.e. 600 * 40%) and can lend the remaining money of Rs. 360 to another person.
3. This process continues until total of Credit equals 2,500 (1,000 * 2.5) and Reserves equals initial money i.e. Rs. 1,000.

Round	Amount Deposited in Bank	Reserve Requirement	Credit Creation
	(A)	(B = A * 0.4)	(C = A – B)
1st (initial)	1,000	400	600
2nd	600	240	360
3rd	360	144	216
4th	216	86	130
All later rounds (b/f)	324	130	194
Total	**2,500 ***	**1,000**	**1,500**

*Initial deposit x Credit Multiplier

CONCEPT REVIEW QUESTION

Q. 3
Commercial banks play a vital role in creation of credit money in an economy. Describe the process of credit creation by commercial banks by means of advancing loans, with the help of an example. **(06)**
(ICAP, CAF 02 Level – Spring 2016)

Q. 4
Suppose a new deposit of Rs. 1,000 comes into the banking system. Show the process of credit creation upto 5 rounds. What would be the total credit creation as a result of this new deposit if reserve requirements are 20 percent? **(08)**
(PIPFA – Winter 2016)

Q. 5
What is the role of Reserve Ratio in credit creation of Commercial Banks? **(04)**
(PIPFA – Summer 2016)

Q. 6
Give reasons why commercial banks strive hard to maintain adequate liquidity at all times.
(ICAP's Official Question Bank for CAF 02 – Q. # 12.1b)

LO 4: LIMITATIONS OF CREDIT CREATION:

Total amount of initial cash:
If the initial amount of cash money is small in economy, then only small credit will be created.

Availability of quality securities:
Banks issue credit only if borrower is able to present valuable good quality securities. If good securities do not exist, then credit will not be created.

Size of Reserve Ratio:
If the reverse ratio is increased, amount of credit creation would decrease, and vice versa.

Cash Leakage:
People may hold cash outside the banking system. If they hold more cash outside banks, then they will pass less cash to next bank. This will decrease credit creation.

Central Bank Policies:
Central bank may utilise a number of instruments to control how much credit is created by banks.

CONCEPT REVIEW QUESTION

Q. 7
Briefly discuss limitations of credit creation in achieving economic objectives. **(05)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 8
With reference to the process of credit creation, explain briefly
(i) how commercial banks can 'create credit'.
(ii) how the central bank can restrict the ability of commercial banks to create credit.
(ICAP's Official Question Bank for CAF 02 – Q. # 13.3b)

Q. 9
Explain how credit can contribute to the money supply and the ways in which the government may try to control its growth.
(ICAP's Official Question Bank for CAF 02 – Q. # 13.1d)

Q. 10
(a) Explain the term 'financial intermediary'.
(b) Explain how banks can create credit and the limitations of this ability.
(ICAP's Official Question Bank for CAF 02 – Q. # 13.2a&b)

LO 5: MONEY MULTIPLIER:

Money Multiplier/Credit Multiplier:
The money/credit multiplier is the multiple (or ratio) of credit that can be created by an initial deposit.

$$\text{Money Multiplier} = 1 / \text{Reserve Ratio}$$

Limitations of Money/Credit Multiplier:

Cash Leakage:
People may hold cash outside the banking system. If they hold more cash outside banks, then they will pass less cash to next bank. This will decrease effect of multiplier.

Excess reserves by banks:
Sometimes, banks hold cash more than reserve ratio (e.g. for strategic purposes). If they hold more cash, then they will pass less cash to next bank. This will decrease effect of multiplier.

CHAPTER FOURTEEN

BALANCE OF PAYMENT AND TRADE

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
PART A – BALANCE OF PAYMENT ACCOUNT			
LO 1	BALANCE OF PAYMENT AND ITS COMPONENTS	14.1.1, 14.1.2, 14.1.3, 14.1.5, 14.1.6, 14.1.7	14.2, 14.5a&b
LO 2	DEFICIT IN BALANCE OF PAYMENT, ITS REASONS AND MEASURES	14.1.4, 14.1.8, 14.1.9	14.1, 14.2, 14.3, 14.4, 14.5c, 14.6, 14.7
LO 3	REASONS AND MEASURES OF DEFICIT WITH PARTICULAR REFERENCE TO PAKISTAN	14.1.9	N/A
PART B – EXCHANGE RATE			
LO 4	WHAT IS EXCHANGE RATE AND HOW IS IT DETERMINED	14.2.1, 14.2.2, 14.2.3, 14.2.4, 14.2.5	14.10, 14.8 a&b
LO 5	TYPES OF EXCHANGE RATE SYSTEMS	14.3.4	N/A
LO 6	MANAGING EXCHANGE RATE	14.3.1, 14.3.2, 14.3.3	N/A
LO 7	DEVALUATION AND ITS EFFECTS	14.4.1, 14.4.2	14.8c
LO 8	REVALUATION AND ITS EFFECTS	14.4.2	N/A

***** October 2016 Edition***

PART A – BALANCE OF PAYMENT ACCOUNT

LO 1: BALANCE OF PAYMENT AND ITS COMPONENTS:

What is a Balance of Payment Account:

Balance of Payment Account is a statement of all financial transactions of a country with rest of the world over a period of time. Simply, it is the summary of imports and exports of a country.

Format/Example of Balance of Payment Account:

Pakistan's Balance of Payment
For the year ended June 30, 2014

	Credits/+	Debit/–	Net Balance/ + or –
Current Account:			
Trade-in-Goods	25,078	(41,668)	(16,590)
Trade-in-Services	5,345	(7,995)	(2,650)
Investment Income /Primary Income	508	(4,463)	(3,955)
Unilateral Transfers/Secondary Income	20,222	(157)	20,065
Total of Current Account		***Surplus/(Deficit)***	**(3,130)**
Financial and Capital Account:			
Foreign Direct Investment			1,572
Portfolio investment			3,981
		Financial Account Balance	5,553
Govt.'s Borrowings			1,857
Official Reserves Assets			(3,858)
		Capital Account Balance	(2,001)
		Errors & Omissions	(422)
Total of Financial and Capital Account			**3,130**

Exam Tips

1. Positive figure represents inflow (i.e. exports); negative figure represents outflow (i.e. imports).
2. Surplus or deficit in current account is equal to value of Net exports in GDP (i.e. X – M).

Current Account and its Components:

Current account records imports and exports of goods, services, investment income and unilateral transfers between domestic country and rest of the world.

Trade-in-Goods:

This includes imports and exports of visible goods e.g. raw material, work in process and finished goods.

Exam Tips - Balance of Trade and Terms of Trade

Balance of Trade: Balance of Trade includes net balance of exports and imports of visible goods (i.e. tangible goods like car, machinery) only. This term is different from Balance of Payment which includes both visible and invisible items (i.e. intangible like financial and consultancy services).

Terms of Trade: A country's terms of trade is "a ratio of export prices to import prices" i.e.

Terms of Trade = Index of Export Prices / Index of Import Prices x 100

Terms of trade greater than 100 is considered as "improving", and terms of trade less than 100 is considered as "worsening". However, improving terms of trade do not necessarily result in surplus in current account (and vice-versa) because terms of trade consider only prices, whereas, current account considers prices as well as quantities.

Trade-in-Services:

This includes imports and exports of services e.g. Financial services, Consultancy, International Transport, and Tourism.

Investment Income /Primary Income:

This includes interest and dividends on foreign investments (e.g. from shares or debentures in foreign companies).

Unilateral Transfers/Secondary Income:

This includes Remittance from Pakistanis working abroad, or overseas aid.

<u>Financial and Capital Account and its Components:</u>

It records inflows and outflows of assets and debts between domestic country and rest of the world.

Financial Account: (= Private sector's investment)

It represents purchase of shares/bonds in foreign companies by residents (or inversely in domestic companies by foreigners). It could be

- Foreign Direct Investment (long-term investment and involvement in management e.g. setting a factory in foreign country)
- Portfolio Investments (short-term investment and no active involvement in management e.g. purchase of less than 10% shares or bonds in a foreign company).
- Financial Derivatives

Capital Account: (= Govt. sector's assets and liabilities)

It includes:

- Purchase or Sale of Official Reserve Assets (e.g. Foreign Currency, Gold)
- Govt. Borrowings or their Repayments (e.g. Debts from other countries/international organizations, issuance of govt.'s securities in international markets)

Exam Tips

Sum of both section of balance of payment should always be zero. Current Account may be in Deficit, in Balance, or in Surplus, however, financial and capital account should be exactly equal to current account.

CONCEPT REVIEW QUESTION

Q. 1

Briefly describe the components of a current account. **(04)**

(ICAP, CAF 02 Level-Spring 2019)

Q. 2

Balance of payments is a combination of current account and capital/financial account. Briefly discuss the components of:
- current account
- capital/financial account **(08)**

(ICAP, CAF 02 Level - Autumn 2015)

Q. 3

What do you understand by balance of payment and balance of trade? Describe the steps that may be taken if there is an adverse balance of payment. **(09)**

(ICAP, CAF 02 Level - Spring 2008)

(ICAP's Official Question Bank for CAF 02 - Q. # 14.2)

Q. 4

What do you understand by 'Terms of Trade'? Briefly explain whether improved terms of trade always mean a fall in the balance of payments deficit. **(04)**

(ICAP, CAF 02 Level - Spring 2016)

Q. 5

Briefly describe "terms of trade". How it is measured? **(03)**

(ICMA Pakistan - Summer 2012)

Q. 6

The current account, the capital account and the financial account make up country's balance of payments. Briefly describe the components of the financial account. **(04)**

(ICAP, CAF 02 Level - Spring 2018)

Q. 7

Briefly explain 'Balance of payment', 'Balance of trade' and 'Terms of trade'. **(06)**

(ICAP, CAF 02 Level - Autumn 2017)

Q. 8

(a) What are the four components of the current account? Place the following in each of the categories:
(i) Finished goods
(ii) Tourism
(iii) Dividends from shares in foreign firms
(iv) Overseas aid

(b) The capital and financial accounts record the flow of capital and finances between domestic country and the rest of the world. Describe three of these flows.

(ICAP's Official Question Bank for CAF 02 - Q. # 14.5a&b)

LO 2: DEFICIT IN BALANCE OF PAYMENT ACCOUNT, ITS REASONS AND MEASURES:

Meaning of Current Account Deficit:

Current Account Deficit (or Deficit in Balance of Payment) means inflow of funds (i.e. exports) of a country is less than outflow of funds (i.e. imports).

Reasons or Causes of Current Account Deficit:

1. **Increase in prices of imported goods:**
   If a country is importing high quantity of raw material (e.g. Oil), then increase in prices in raw material will cause increase in deficit.

2. **Long-term decline in productive potential:**
   If productive potential of a country is reduced (e.g. due to war, or natural disaster, or political instability), then country will have less to export and may have to increase import to meet its needs.

3. **Foreign goods are cheaper and better:**
   Inflation in domestic market makes local goods expensive and people may buy imported goods.

4. **Appreciation in exchange rate:**
   Strong domestic currency causes increase in imports and decrease in exports.

5. **Inelastic demand for imports:**
   In less-developed countries, demand for some goods is inelastic because of shortage of such goods. Therefore, their imports are high.

> **Study Tip – Dealing with Current Account Deficit**
> If a government has a deficit in current account, it will have to either finance the deficit or correct the deficit.

<u>Financing a Current Account Deficit:</u>
Financing a current account deficit means use of finance to pay for deficit. A government can finance the current account deficit by:

- Selling official reserves (e.g. Foreign Currency, Gold) and assets.
- Government borrowings (from international organizations e.g. IMF or World Bank or from foreign governments, issue of government securities,)

<u>Correcting a Current Account Deficit:</u>
A current account deficit cannot be financed for a long term. Therefore, government must use policies to reduce (or remove or rectify) deficit.

Monetary measures to correct current account deficit:

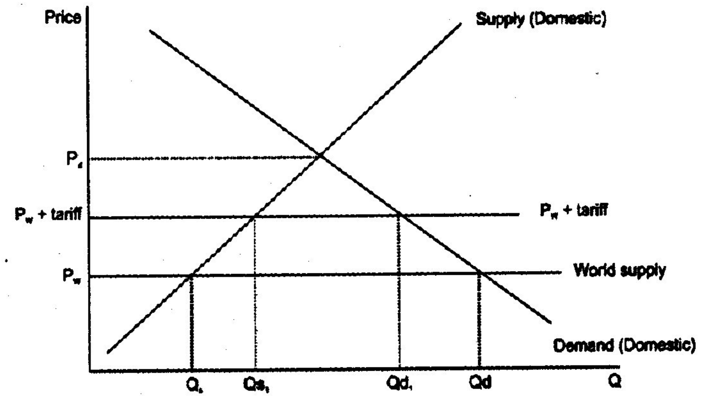
- **Depreciation in Exchange Rate:**
  If local currency is depreciated, imports will decrease and exports will increase.

- **Deflation:**
  If prices of goods in local market are reduced, then foreigner will be attracted to buy cheaper goods and exports will increase.

- **Controls over foreign exchange reserves:**
  In extreme cases, regulatory authorities (e.g. central bank) may put restrictions on individual's dealing in foreign exchange reserve, so that importers are not able to buy goods.

Non-monetary measures to correct current account deficit:

- **Tariffs:**
  Tariffs are duties on imports. These increase price of imported goods. Therefore, demand of imported goods decreases (and local supply increases) which improves current account deficit.



- **Quotas:**
  It is a limit on quantity of foreign goods that can be imported in domestic market.

- **Export Promotion:**
  Government can provide subsidies to exporters (e.g. tax exemptions or finance at reduced rates). Export can also be promoted by organizing exhibitions and trade fairs to create awareness among overseas importers.

- **Import Substitution:**
  Country should become self-reliant and should produce more goods domestically. This can be done by providing special training and subsidies to domestic industry producing import substituted goods.

CONCEPT REVIEW QUESTION

Q. 9
(a) Explain what is meant by the term 'a balance of payments deficit'.
(b) Describe the main factors that might lead a country to experience a deficit on the current account of its balance of payments.
(c) Explain the difference between 'financing' a balance of payments deficit and 'correcting' that deficit.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.1)

Q. 10
Describe the measures a country may take to correct disequilibrium in the Balance of Payments.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.3)

Q. 11
Briefly discuss five main causes of disequilibrium in the balance of payments. **(05)**
(ICAP, CAF 02 Level – Autumn 2016)

Q. 12
Briefly explain various monetary and non-monetary measures which may be taken by the government to correct balance of payments deficit. **(06)**
(ICAP, CAF 02 Level – Spring 2016)

Q. 13
(a) Briefly describe the main causes of disequilibrium in the balance of payments. **(07)**
(b) State the measures for rectifying disequilibrium in the balance of payments. **(07)**
(ICAP, CAF 02 Level – Autumn 2012)
(ICAP's Official Question Bank for CAF 02 – Q. # 14.4)

Q. 14
Explain in brief the major causes of current account deficit in Pakistan. Also suggest some measures to correct this deficit. **(10)**
(PIPFA – Winter 2017)

Q. 15
Discuss the non-monetary corrective measures which a country may take to overcome its current account deficit. **(04)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 16
If a government had a balance of payments deficit, how could they balance.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.5c)

Q. 17
(a) Explain a current account deficit with reference to the income and outflow of a country.
(b) Name and explain three causes of a current account deficit in a country.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.6)

Q. 18
(a) What is a tariff?
(b) Explain, with a diagram, how tariffs can help correct a current account deficit.
(c) What other non-monetary measures could a government take to reduce a current account deficit?
(ICAP's Official Question Bank for CAF 02 – Q. # 14.7)

LO 3: REASONS AND MEASURES OF DEFICIT WITH PARTICULAR REFERENCE TO PAKISTAN:

Reasons of current account deficit in Pakistan:

1. **Narrow Export Base:**
   Pakistan is an agrarian country. Pakistan's export has remained narrow and is limited to relatively low value goods e.g. agricultural goods like Rice, Cotton, Leather, Fish etc.

2. **Rising Consumption Base:**
   Due to rising population and consumption habits, Pakistan has remained a consumption oriented country.

3. **Foreign Debt:**
   Pakistan has obtained loan from various international organizations and countries. Large interest payments have adversely affected balance of payment.

4. **Political Instability:**
   Political instability has impacted efficiency of industries.

5. **Lack of Automated Machinery:**
   Pakistan is not a technologically advanced country. Use of outdated technology has declined quality of goods and has resulted in decreased exports.

Measures to remove current account deficit in Pakistan:

1. **Setting labor intensive industries:**
   Labor is cheaper in Pakistan, hence cheap products can be produced in Pakistan which can be exported.

2. **Reducing Export Duties:**
   Reduced duties will cause reduction in prices. Because of reduced prices of exported goods, foreigners may prefer to buy our products.

3. **Joint-Venture:**
   By establishing a joint-venture with foreign investors, our sales can be boosted outside the country.

4. **Controlled Imports:**
   Import should be restricted only to necessary items. Import of luxury items should be discouraged.

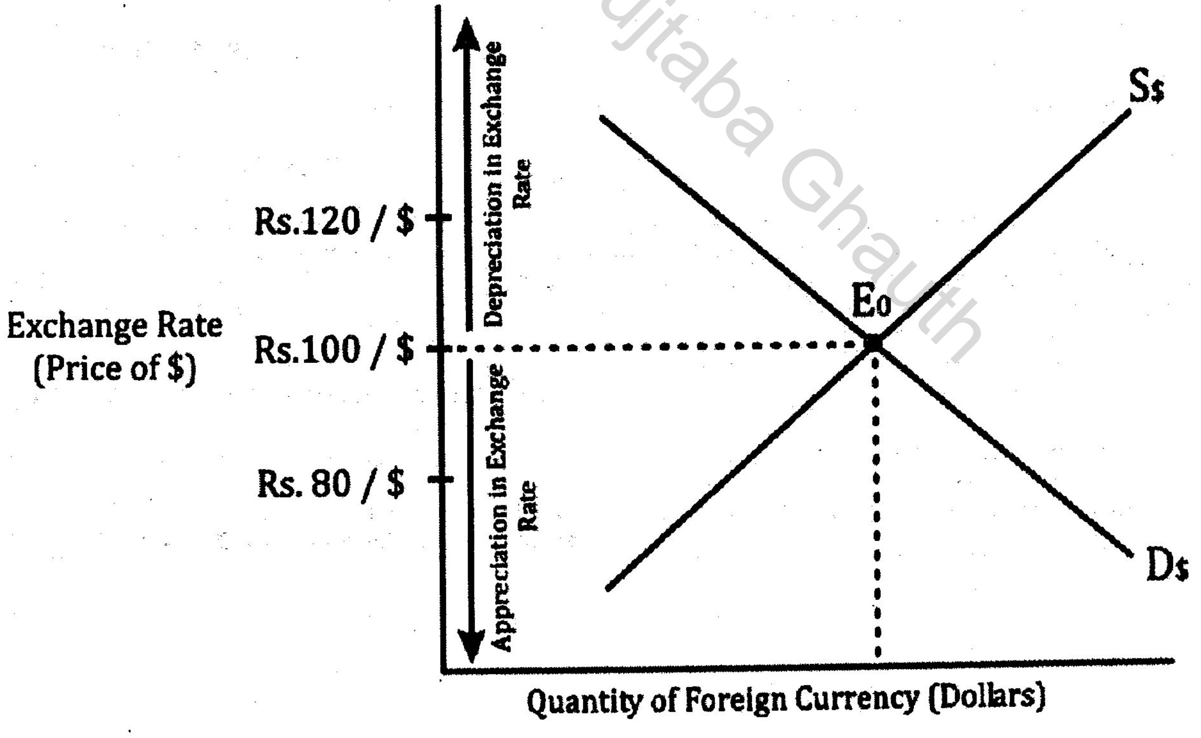
5. **Discouraging Immoral Activities:**
   Many traders in Pakistan export goods of inferior quality, than specified in the agreement. Government should exercise strong control over it.

PART B – EXCHANGE RATE

LO 4: WHAT IS EXCHANGE RATE AND HOW IS IT DETERMINED:

What is an Exchange Rate:
An exchange rate is the price of a foreign currency expressed in terms of domestic currency.

How exchange rate is determined:
In a free market, Exchange Rate is determined by the equilibrium of demand of foreign currency and supply of foreign currency.



Equilibrium:
The diagram represents demand curve and supply curve of foreign currency (e.g. dollar). Exchange rate will be determined at the point where demand is equal to supply (e.g. Rs. 100/$).

Effect of change in Exchange Rate:

Situation	Effect on Exchange Rate/Local Currency	Effect on Imports	Effect on Exports
Demand for Foreign Currency Increases	Depreciates	Decrease	Increase
Demand for Foreign Currency Decreases	Appreciates	Increase	Decrease
Supply for Foreign Currency Increases	Appreciates	Increase	Decrease
Supply for Foreign Currency Decreases	Depreciates	Decrease	Increase

Study Tips – Alternate Terms

1. Alternate words for Depreciation: Devaluation, Low or Weak.
2. Alternate words for Appreciation: Revaluation, High or Strong.
3. When a local currency appreciates, foregin currency automatically depreciates (and vice-versa).

CONCEPT REVIEW QUESTION

Q. 19
What does 'Foreign Exchange Rate' mean? The Foreign Exchange Rates fluctuate in accordance with intensity of demand and supply of a foreign currency. Illustrate this process. **(06)**
(ICMA Pakistan – Summer 2012)

Q. 20
(a) What is meant by devaluation of currency? **(02)**
(b) ABC country decides to devaluate its currency with respect to foreign currencies. How would this decision affect the exports, imports and balance of the payments of economy? **(08)**
(PIPFA – Winter 2016)

Q. 21
What is meant by 'Exchange rate'? Briefly describe the impact of fall in exchange rate on a country's exports and imports. **(04)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 22
What is meant by appreciation and depreciation of currency? Suppose: U.S. Dollar was being traded yesterday in foreign exchange market at 105 PKR per USD and today it is being traded at 110 PKR per USD. Which of the two currencies (U.S. Dollar or Pak Rupee) has appreciated and which has depreciated today? **(04)**
(PIPFA – Winter 2017)

Q. 23
Explain the effect on the business sector of an economy of change in exchange rate.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.10)

Q. 24
(a) If a country experiences exchange rate depreciation in relation to a trading partner, will its exports become more, or less attractive to the other country?
(b) If the exchange rate was Rs.6: US$1, and the rupee depreciates by 50%, what will the new exchange rate be?
(ICAP's Official Question Bank for CAF 02 – Q. # 14.8a&b)

LO 5: TYPES OF EXCHANGE RATE SYSTEMS:

A Government can follow two types of exchange rate policies i.e.

1. Flexible or Floating Exchange Rate System
2. Fixed Exchange Rate System

Flexible or Floating Exchange Rate System:

Definition:

This is a system in which exchange rate for a currency is determined by market forces of demand and supply of foreign currency; government does not interfere in exchange market.

Advantages of Floating Exchange Rate System:

- The need for government intervention in the foreign exchange markets is eliminated. Government can concentrate on internal issues such as unemployment and inflation.
- Governments do not have to spend or even hold foreign currency reserves.
- Deficit or surplus in Balance of payment is automatically corrected e.g. if there is a deficit in BOP, exchange rate will depreciate. Subsequently, this will increase exports and decrease imports and will restore equilibrium.

Fixed Exchange Rate System:

Definition:

This is a system in which government sets fixed exchange rate against one or more foreign currencies.

Advantages of Fixed Exchange Rate System:

- Avoids speculation against the currency.
- Promotes trade as importers and exporters are protected from exchange rate risks.
- Government has to pursue responsible economic policies (i.e. government has to balance imports and exports as disequilibrium may affect exchange rate).

CONCEPT REVIEW QUESTION

Q. 25

What do you understand by the terms 'floating exchange rate' and 'fixed exchange rate'? List three advantages of each of the above types of exchange rates. (07)

(ICAP, CAF 02 Level – Autumn 2014)

Q. 26

Exchange rate may either be fixed or floating. State three advantages of each of these types of exchange rates. (06)

(ICAP, CAF 02 Level-Spring 2019)

LO 6: MANAGING EXCHANGE RATE:

Government may sometimes influence/manage its exchange rate i.e. government may devalue or revalue its currency.

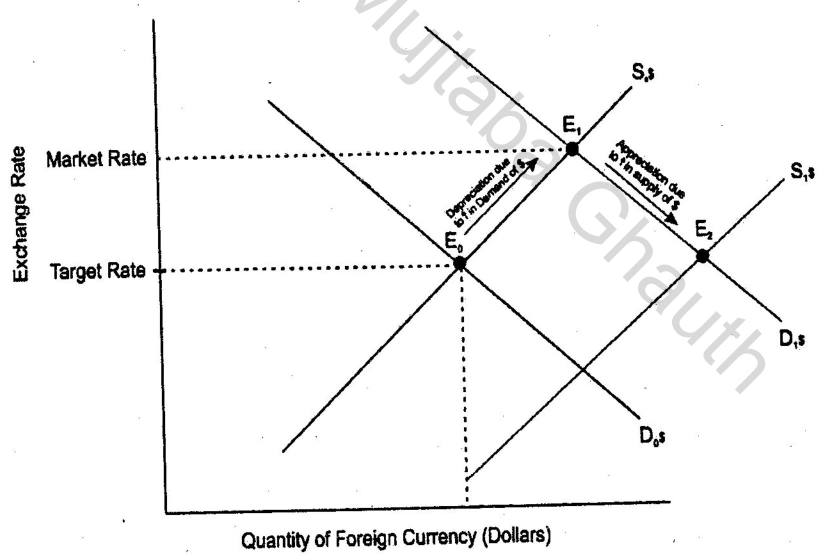
Reasons/Objectives for Managing the Exchange Rate:

1. To remove disequilibrium in balance of payment and foreign exchange market e.g. devaluation will increase export, decrease imports.
2. To remove output gap e.g. a devaluation will increase export, decrease imports which will increase aggregate demand.
3. To stabilize currency to encourage domestic traders.
4. To discourage speculation in foreign currency
5. To lower inflation.

Government policy instruments to influence exchange rates:

Government can influence exchange rate in following ways:

1. **Open market operations.**
   If government wants to stop its exchange rate from falling, central bank will sell foreign currency in market. This will increase supply of foreign currency in the market and appreciation in exchange rate.



2. **Interest Rate.**
   If government wants to stop its exchange rate from falling, government will increase domestic interest rate, people will save more and this will decrease demand for foreign currency in the market and appreciation in exchange rate.

3. **Policies to remove disequilibrium in balance of payment.**
   Deficit in balance of payment causes depreciation in exchange rate. If this deficit is removed, currency will appreciate.

4. **Structural adjustments to the behavior of the economy.**
   Govt. discourages the behaviors of people for investment in foreign currency for speculative purposes. This will decrease demand of foreign currency.

CONCEPT REVIEW QUESTION

Q. 27

Why do governments interfere to influence the foreign exchange rates? List the policy instruments available to a government to influence the foreign exchange rates. **(05)**

(ICAP, CAF 02 Level-Autumn 2018)

Q. 28

Illustrate with the help of a diagram, how the government may stop exchange rate from falling. **(06)**

(ICAP, CAF 02 Level – Spring 2018)

Q. 29

Governments often seek to achieve certain objectives by influencing the exchange rates. Identify any three such objectives. **(03)**

(ICAP, CAF 02 Level – Spring 2016)

Q. 30

Suppose the value of Pak rupee is depreciating against dollar. How can Government or Central Bank influence the foreign exchange rate to make the value of currency stable? **(06)**

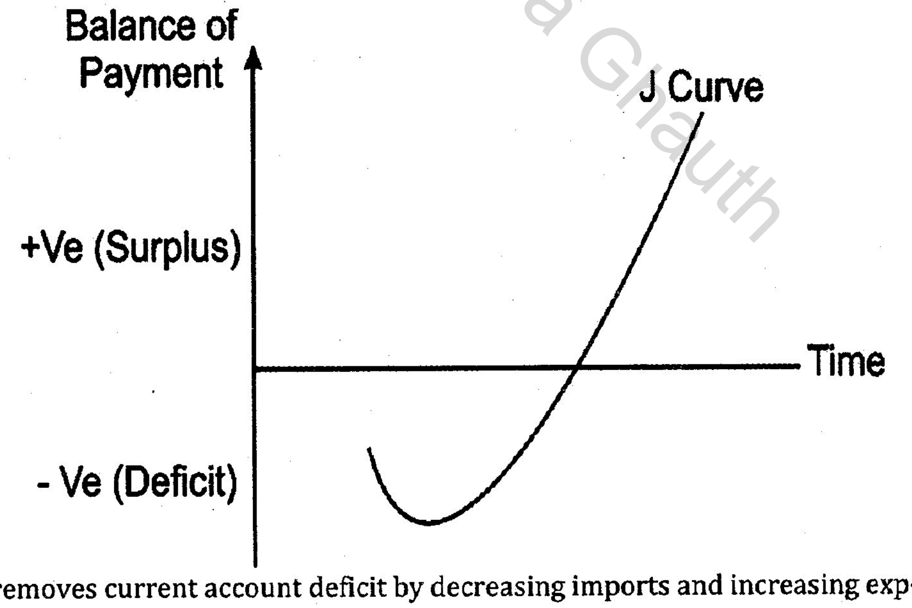
(PIPFA – Winter 2017)

LO 7: DEVALUATION AND ITS EFFECTS:

Devaluation:

Devaluation means a policy of deliberately weakening the local currency against others, in fixed rate system. Objective of devaluation is to increase exports and decrease imports.

Effect of Devaluation on Current Account:



Devaluation removes current account deficit by decreasing imports and increasing exports.

If a country devalues its currency, its current account balance experiences J-Curve i.e. at first current account balance declines (i.e. deteriorates) further and then gradually rises (i.e. improves) to a higher level than it was before decline.

Initially deficit gets bigger because of inelastic demand of imports and exports, and existing import/export contracts which require time-lag to adjust. In such case, expenditure for import will rise more than income from exports.

Effectiveness of Policy:

The effectiveness of policy of devaluation depends on:

1. **Elasticity of demand for imports:**
   If the demand for imported goods and services is inelastic then devaluation will not significantly reduce imports. Rather, it would increase total expenditure on imports thus deepening the deficit.

   Demand for imports may be inelastic due to:
   - High preference for foreign goods.
   - Inability of domestic firms to substitute imports.
   - High dependence on imported raw material and foods.

2. **Elasticity of demand for exports**
   If demand for exported goods and services is inelastic then devaluation will not significantly increase exports. Rather, it would reduce total income from exports and deepen the deficit.

   Demand for exports may be inelastic due to:
   - Poor quality of exports.
   - Inability of domestic firms to take advantage of export demand.

CONCEPT REVIEW QUESTION

Q. 31
What do you understand by 'J curve'? Explain with the help of a 'J curve', how in the short-run the current account deficit may get worse before improving.
(10)
(ICAP, CAF 02 Level – Spring 2017)

Q. 32
Governments often follow a policy of deliberately weakening the domestic currency by reducing its parity value within a fixed rate system. Identify the purpose of following such policy and also discuss the factors upon which effectiveness of such policy depends.
(07)
(ICAP, CAF 02 Level – Spring 2016)

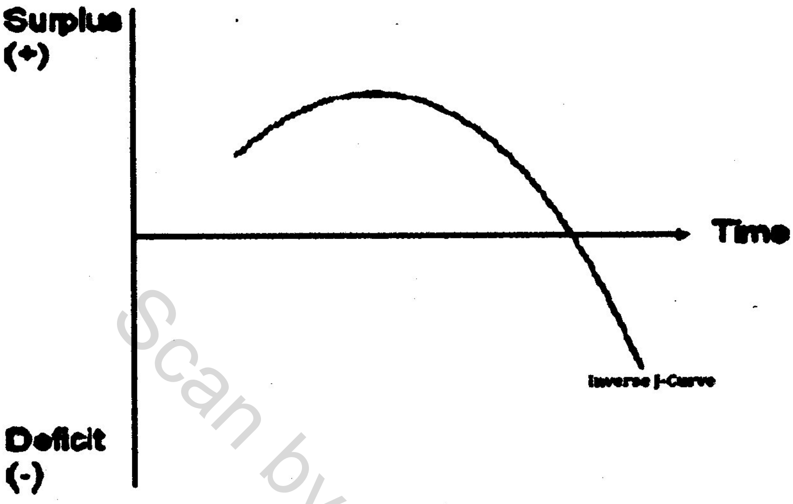
Q. 33
Sometimes the governments weaken the domestic currency deliberately with the objective of reducing balance of payments deficits by making imports more expensive and exports less expensive. Describe the factors upon which the effectiveness of such policy depends.
(05)
(ICAP, CAF 02 Level-Autumn 2018)

Q. 34
Why might devaluation strategy not be immediately effective at correcting a current account deficit? Explain with reference to a J-curve.
(ICAP's Official Question Bank for CAF 02 – Q. # 14.8c)

LO 8: REVALUATION AND ITS EFFECTS:

Revaluation:

Revaluation removes current account surplus by making exports expensive and imports cheaper. If a country revalues its currency, current account balance experiences inverse J-curve.



Effect of Revaluation on Current Account:

Revaluation removes current account deficit by increasing imports and decreasing exports.

If a country revalues its currency, its current account balance experiences inverse J-Curve i.e. at first current account balance rises (i.e. improves) further and then gradually declines (i.e. deteriorates) to a lower level than it was before decline.

CONCEPT REVIEW QUESTION

Q.35

What do you understand by the term 'Inverse J curve'? Explain the concept with the help of a diagram. **(05)**

(ICAP, CAF 02 Level-Spring 2019)

CHAPTER FIFTEEN

FINANCIAL MARKETS

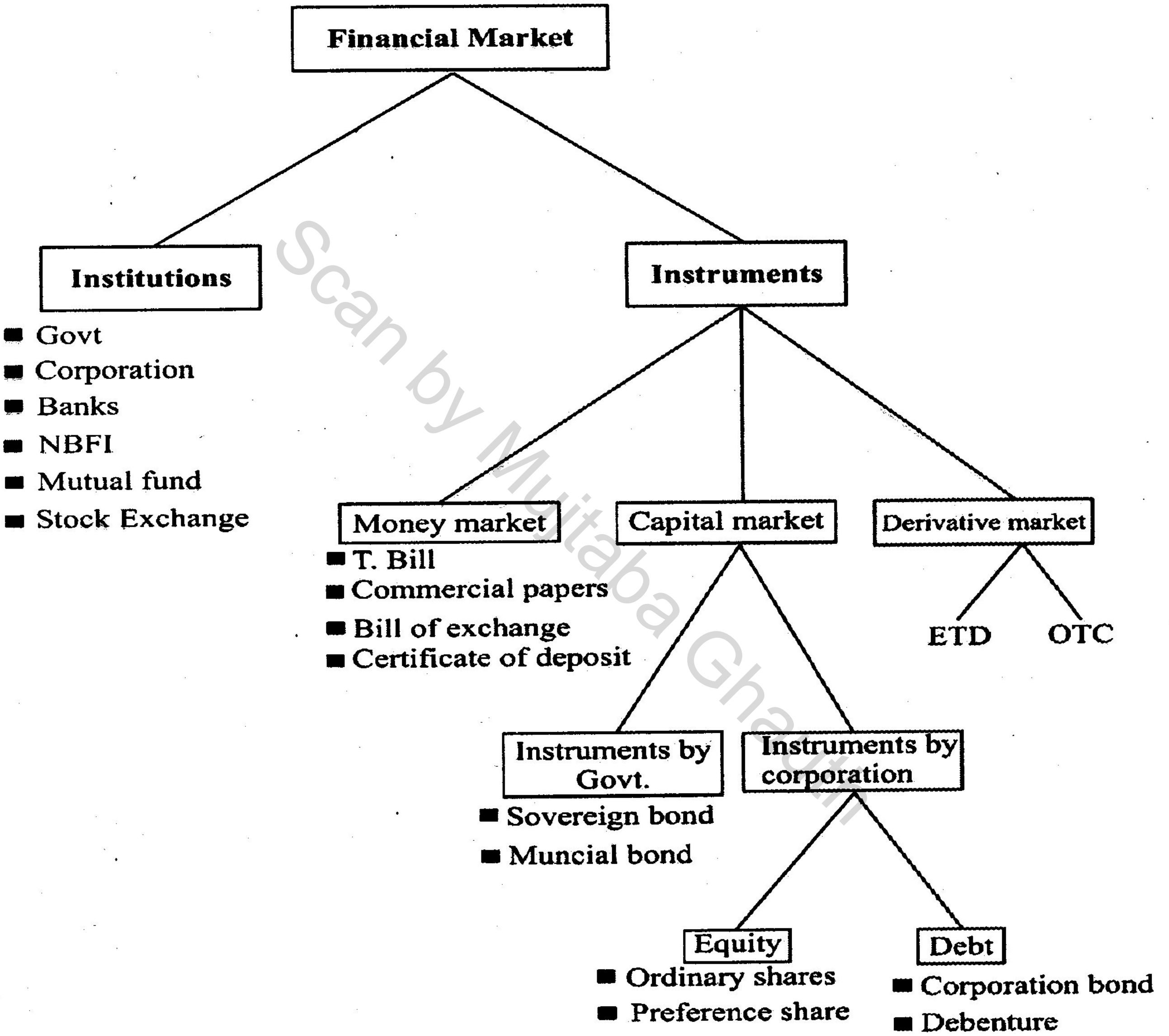
LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
LO 1	FINANCIAL MARKETS AND ITS EXAMPLES	15.1.1	N/A
LO 2	MONEY MARKETS	15.1.2	15.1, 12.3
LO 3	CAPITAL MARKETS	15.1.3	15.1, 15.3, 15.4
LO 4	DERIVATIVE MARKETS	15.1.4	15.2

*** October 2016 Edition*

LO 1: FINANCIAL MARKETS AND ITS EXAMPLES:

Financial Markets bring lenders and borrowers together to meet their financial needs through purchase and sale of financial instruments e.g. stocks, bonds.

Examples of financial markets include Money Markets, Capital Markets and Derivative Markets.



LO 2: MONEY MARKETS:

Definition:

Money market is a type of financial market used by different institutions to raise short-term finance (i.e. having maturity date of usually less than three months).

Institutions that operate in money market:

Money market is used by large institutions to arrange cash for short-term.

1. Government
2. Corporations
3. Banks and Non-Banking Financial Institutions (e.g. discount houses)
4. Mutual Funds

Examples of Instruments:

1. **Treasury Bills (T-bills):**
   Treasury bills (T-bills) are short-term instruments issued by government to raise money from the public to finance government expenditure. T-bills have lower yield because the risk of default is low as they are backed by government.

2. **Certificate of Deposits (CDs):**
   Certificate of Deposit are instruments issued by banks to raise money. Money will be repaid to holder after fixed short-term period. CDs have higher yield because the risk of default is high as compared to government.

3. **Commercial Papers:**
   Commercial papers are instruments issued by corporations to raise money from the public. This is issued with the promise to repay the holder a certain amount after fixed short-term period.

Note: Rate of interest on money market is based on 'base rate' of central bank.

CONCEPT REVIEW QUESTION

Q. 1

What is money market? Describe the institutions and instruments of money market.

(ICAP, CAF 02 Level - Autumn 2003)

Q. 2

Define 'Money market'. Briefly describe any two marketable instruments traded on money markets. **(04)**

(ICAP, CAF 02 Level - Spring 2017)

LO 3: CAPITAL MARKETS:

Definition:

Capital market is a financial market used by different institutions to raise long-term finance and capital (i.e. credit having maturity date of usually more than one year).

Objectives:

- To mobilize savings.
- To provide long-term finance to corporation and government.

Institutions that operate:

1. Government (e.g. to finance a war or construction of highways, dams etc., or to implement fiscal policy)
2. Corporation
3. Commercial Banks
4. Non-banking financial institutions (e.g. insurance companies, mortgage banks)
5. Stock Exchanges/Market (A stock exchange is a place where financial instruments which have been issued, are listed. Stock market publishes live prices at which each instrument can be sold or purchased.)

Examples of Instruments:

There are two broad categories of capital market instruments i.e.

1. **Equity Instruments** (Issuing equity instruments means selling rights of ownership) e.g.
   a. Ordinary Shares
   b. Preference Shares

2. **Debt Instruments** (Issuing debt instruments means agreeing to repay a certain sum at a later date) e.g.
   a. Sovereign Bonds (These are issued by government in capital market to fund a large, long-term project)
   b. Municipal bonds
   c. Corporation Bonds (These are issued by corporations in capital market to fund a large, long-term project)
   d. Debentures

Comparison of Equity Instruments:

	Ordinary (or Equity or Common) Shares (or Stock)	Preference Shares (or Stock)
Voting rights	Can vote at general meetings.	Cannot vote at general meetings.
Rights of payment of dividend and capital	Subordinate Right i.e. payment is made after paying to preference shares.	Preference right i.e. payment is made before paying ordinary shares.
Percentage of dividend	Uncertain.	Normally fixed.
Redeemable	Not redeemable.	Usually redeemable.

Rate of return in capital market is decided on individual basis, rather than on official interest rate.

Exam Tip – Broker

Brokers are people who act agent for buyers and sellers of financial instruments. They take commission against transactions done through them.

CONCEPT REVIEW QUESTION

Q. 3
Define capital market and list any four types of organizations that operate in the capital market. **(04)**
(ICAP, CAF 02 Level – Autumn 2016)

Q. 4
Define Money and Capital Market. Explain two instruments of each of the markets. **(10)**
(PIPFA – Winter 2015)

Q. 5
Explain the following types of shares:
(i) Common Stock **(03)**
(ii) Preference Shares **(03)**
(PIPFA – Summer 2016)

Q. 6
What is a capital market? State its main objectives. **(03)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 7
(a) Distinguish between 'Money Market' and 'Capital Market'. Identify any three institutions which operate in each market. **(06)**
(b) Various sources of short-term and long-term credit are available to the firms. Briefly discuss any two sources in each case. **(06)**
(ICAP, CAF 02 Level – Spring 2015)

Q. 8
(a) Distinguish between the 'money market' and the 'capital market', and identify the main institutions which operate in each market.
(b) Using examples, show how a business might need to use both the money and capital markets.
(c) Explain the circumstances under which the government might need to use the capital market.
(ICAP's Official Question Bank for CAF 02 – Q. # 15.1)

Q. 9
(a) What is the main distinction between capital markets and money markets?
(b) Who are the typical participants in the capital market?
(c) How might an individual investor have access to the capital market? Describe in detail.
(ICAP's Official Question Bank for CAF 02 – Q. # 15.3)

Q. 10
(a) Explain briefly the two categories of instruments traded on the capital markets?
(b) Describe the difference between 'common stock' and 'preference shares'.
(c) Suppose a government wishes to raise money through capital markets for a long term investment. Explain the choices that they have, and what factors are likely to affect their choice?
(ICAP's Official Question Bank for CAF 02 – Q. # 15.4)

LO 4: DERIVATIVE MARKETS:

Derivative markets:

The derivatives market is where a variety of derivative instruments are traded.

Derivatives:

A derivative is a financial instrument whose value depends on the values of other more basic underlying variables. It is merely a contract between two parties whose price changes with change in underlying asset.

There are two parties Long (i.e. party who agrees to buy at agreed price), and Short (i.e. party who agrees to sell at agreed price). When price of underlying asset increases, party with 'long' position gains, and party with 'short' position loses. In the end, both positions are equaled.

Objectives:

- To reduce risk of change in prices.

How to trade in Derivatives:

There are two types of trading derivatives:

	Exchange Traded Derivatives (ETD)	Over The Counter (OTC) Derivatives
Description	Organized and regulated market in which standardized derivatives are traded. A derivative must meet certain strict criteria to be traded on an exchange.	Decentralized and less regulated market in which derivatives are traded on individual basis. The conditions for establishing and trading an OTC derivative are much less strict.
Benefits	▪ High Liquidity ▪ Backed by Clearing House. ▪ Low Risk and Low Cost.	▪ Greater flexibility with regard to the terms of the deal.
Drawbacks	Less flexibility and therefore less quantity of derivatives that can be traded (traded only if it meets criteria).	▪ Low or No Liquidity ▪ Not backed by clearing house. ▪ High Risk and High Cost.
Examples	Futures	Forwards and Options.

CONCEPT REVIEW QUESTION

Q. 11
What do you understand by the term 'Derivative'? List different ways in which derivatives are traded. **(03)**
(ICAP, CAF 02 Level – Spring 2015)

Q. 12
Briefly discuss the main features of derivatives **(2.5)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 13
What do you understand by the term 'Derivatives'? State the main objective of exchange traded derivatives. **(03)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 14
What are the two ways that an investor can buy a derivative product? Explain how they differ, and what the benefits and drawbacks of each are.
(ICAP's Official Question Bank for CAF 02 – Q. # 15.2b)

CONCEPT REVIEW QUESTION

Q. 3

Define capital market and list any four types of organizations that operate in the capital market. **(04)**

(ICAP, CAF 02 Level – Autumn 2016)

Q. 4

Define Money and Capital Market. Explain two instruments of each of the markets. **(10)**

(PIPFA – Winter 2015)

Q. 5

Explain the following types of shares:

(i) Common Stock **(03)**

(ii) Preference Shares **(03)**

(PIPFA – Summer 2016)

Q. 6

What is a capital market? State its main objectives. **(03)**

(ICAP, CAF 02 Level – Spring 2018)

Q. 7

(a) Distinguish between 'Money Market' and 'Capital Market'. Identify any three institutions which operate in each market. **(06)**

(b) Various sources of short-term and long-term credit are available to the firms. Briefly discuss any two sources in each case. **(06)**

(ICAP, CAF 02 Level – Spring 2015)

Q. 8

(a) Distinguish between the 'money market' and the 'capital market', and identify the main institutions which operate in each market.

(b) Using examples, show how a business might need to use both the money and capital markets.

(c) Explain the circumstances under which the government might need to use the capital market.

(ICAP's Official Question Bank for CAF 02 – Q. # 15.1)

Q. 9

(a) What is the main distinction between capital markets and money markets?

(b) Who are the typical participants in the capital market?

(c) How might an individual investor have access to the capital market? Describe in detail.

(ICAP's Official Question Bank for CAF 02 – Q. # 15.3)

Q. 10

(a) Explain briefly the two categories of instruments traded on the capital markets?

(b) Describe the difference between 'common stock' and 'preference shares'.

(c) Suppose a government wishes to raise money through capital markets for a long term investment. Explain the choices that they have, and what factors are likely to affect their choice?

(ICAP's Official Question Bank for CAF 02 – Q. # 15.4)

LO 4: DERIVATIVE MARKETS:

Derivative markets:

The derivatives market is where a variety of derivative instruments are traded.

Derivatives:

A derivative is a financial instrument whose value depends on the values of other more basic underlying variables. It is merely a contract between two parties whose price changes with change in underlying asset.

There are two parties Long (i.e. party who agrees to buy at agreed price), and Short (i.e. party who agrees to sell at agreed price). When price of underlying asset increases, party with 'long' position gains, and party with 'short' position loses. In the end, both positions are equaled.

Objectives:

- To reduce risk of change in prices.

How to trade in Derivatives:

There are two types of trading derivatives:

	Exchange Traded Derivatives (ETD)	Over The Counter (OTC) Derivatives
Description	Organized and regulated market in which standardized derivatives are traded. A derivative must meet certain strict criteria to be traded on an exchange.	Decentralized and less regulated market in which derivatives are traded on individual basis. The conditions for establishing and trading an OTC derivative are much less strict.
Benefits	▪ High Liquidity ▪ Backed by Clearing House. ▪ Low Risk and Low Cost.	▪ Greater flexibility with regard to the terms of the deal.
Drawbacks	Less flexibility and therefore less quantity of derivatives that can be traded (traded only if it meets criteria).	▪ Low or No Liquidity ▪ Not backed by clearing house. ▪ High Risk and High Cost.
Examples	Futures	Forwards and Options.

CONCEPT REVIEW QUESTION

Q. 11
What do you understand by the term 'Derivative'? List different ways in which derivatives are traded. **(03)**
(ICAP, CAF 02 Level – Spring 2015)

Q. 12
Briefly discuss the main features of derivatives **(2.5)**
(ICAP, CAF 02 Level-Autumn 2018)

Q. 13
What do you understand by the term 'Derivatives'? State the main objective of exchange traded derivatives. **(03)**
(ICAP, CAF 02 Level – Spring 2018)

Q. 14
What are the two ways that an investor can buy a derivative product? Explain how they differ, and what the benefits and drawbacks of each are.
(ICAP's Official Question Bank for CAF 02 – Q. # 15.2b)

CHAPTER SIXTEEN

MISCELLANEOUS CONCEPTS

LO #	LEARNING OBJECTIVE	ICAP's Study Text Reference **	ICAP's Question Bank Reference **
LO 1	CONSUMER VALUE	2.2.3	N/A
LO 2	TRANSIVITY	4.3.4	N/A
PART A – PRICE INSTABILITY IN CERTAIN MARKETS			
LO 3	REASONS FOR PRICE INSTABILITY AND GOVERNMENT'S POLICIES	3.3.2	N/A
LO 4	COBWEB THEORY TO CYCLIC FLUCTUATIONS IN PRICES	3.3.3	N/A
PART B – DERIVING LONG RUN COST CURVES			
LO 5	DERIVING LONG-RUN AVERAGE COST CURVE	5.2.4	N/A
LO 6	DERIVING LONG-RUN MARGINAL COST CURVE	5.2.5	N/A

***** October 2016 Edition***

LO 1: CONSUMER VALUE:

When price of a product decreases, its consumer value increases.

Consumer Value = Satisfaction from consuming a good/ Price of a good

LO 2: TRANSIVITY:

A rule that implies an agent's decisions are consistent

If a consumer prefers Good A to Good B, and Good B to Good C, then it can be inferred that the consumer also prefers Good A to Good C.

PART A – PRICE INSTABILITY IN CERTAIN MARKETS

LO 3: REASONS FOR PRICE INSTABILITY AND GOVERNMENT'S POLICIES:

Reasons for Instability in price: *(particularly in agriculture sector)*

- Inelastic demand and supply of products (If demand and supply are inelastic, prices will be instable).
- Weather conditions (good or bad) which can dramatically affect the supply in market, which in turn affects price.
- Competition to produce other goods *(which are more profitable).*

Government's Policies to increase Stability:

Govt.'s Policies:

- Direct payments or providing subsidies to producers for producing particular crops
- Buffer stock scheme (purchasing and storage of surplus stock by government and selling at time of shortage to stabilize prices in the market)

Disadvantages of Buffer Stock Scheme:

1. It is extremely difficult to decide the price at which the market should be stabilized
2. Government needs public fund to purchase stock.
3. There are lot of administrative efforts, storage cost with maintaining buffer stock.
4. Purchase of surplus stock by government at higher price may encourage overproduction, which may have to be dumped in world market.

CONCEPT REVIEW QUESTION

Q. 1

What measures are taken by the government to cope up with the agricultural price instability?

(ICMA Pakistan – Summer 2012)

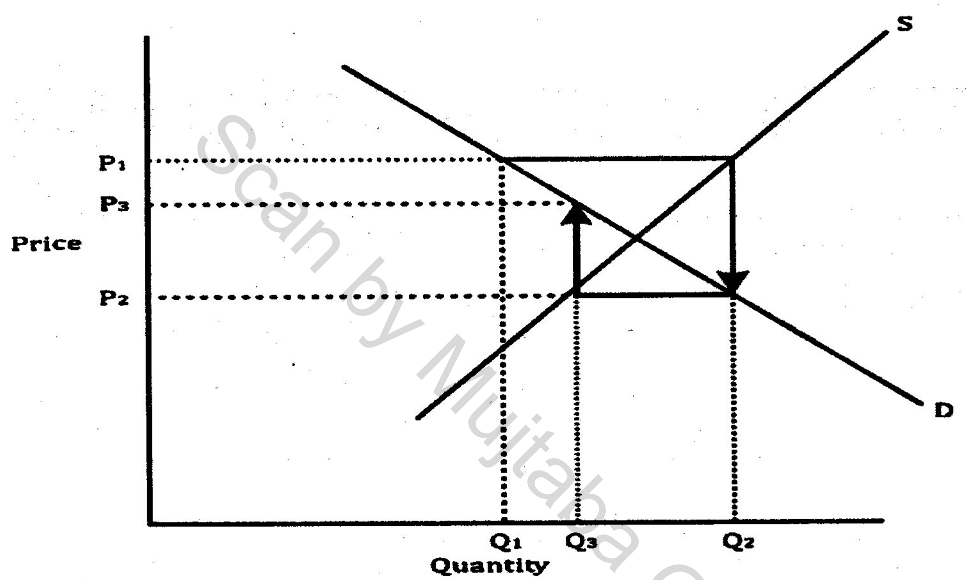
LO 4: COBWEB THEORY TO CYCLIC FLUCTUATIONS IN PRICES:

Theory:

Cobweb theory explains reason for periodic fluctuations of prices in certain markets (e.g. in agricultural markets).

Fluctuation in price occurs when, on the basis of current market price, farmers decide about supply in future. Therefore, supply in future may be more or less than equilibrium quantity, causing change in price.

Diagram and Explanation:



First time period:

Suppose in a market, supply decreases to **Q_1** due to some disease, and consequently price is **P_1**. Now the price is higher than the equilibrium price.

Second time period:

Higher price leads producers to increase their supply to **Q_2** in 2nd time period. When this increased supply reaches market, producers will be disappointed to see that price has fallen to **P_2** (due to rightward shift of supply curve).

Third time period:

Lower price leads producers to decrease their supply to **Q_3** in 3rd time period. When this decreased supply reaches market, producers will be delighted to see that price has risen to **P_3** (due to leftward shift of supply curve).

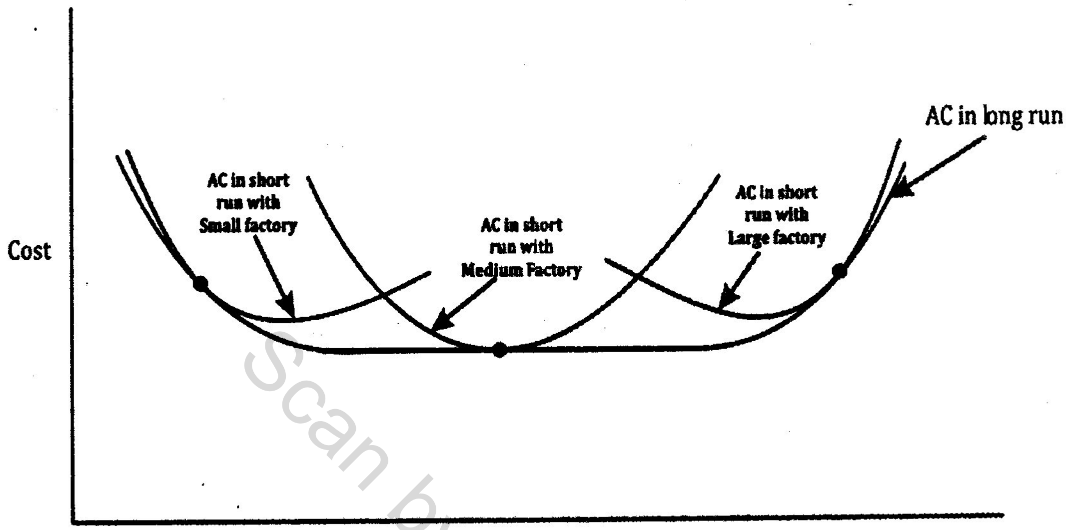
It is easy to see what will happen in subsequent time periods: price and quantity will continue to change until market reaches equilibrium price.

Critique of Cobweb Theory:

After a few rounds, producers would learn that it is not a best strategy to base production decision on last period's prices.

PART B – DERIVING LONG RUN COST CURVES

LO 5: DERIVING LONG-RUN AVERAGE COST CURVE:



The long-run average cost curve is a much flatter U-shape than the short-run average cost curve.

All the short-run curves lie on or above the long-run curve.

At planned level of output, short run average total cost and long run average total cost are equal but at any other level of output short-run average cost is higher than long run average cost. This is called ***"envelope relationship"*** between long-run cost and short-run cost.

CONCEPT REVIEW QUESTION

Q. 2

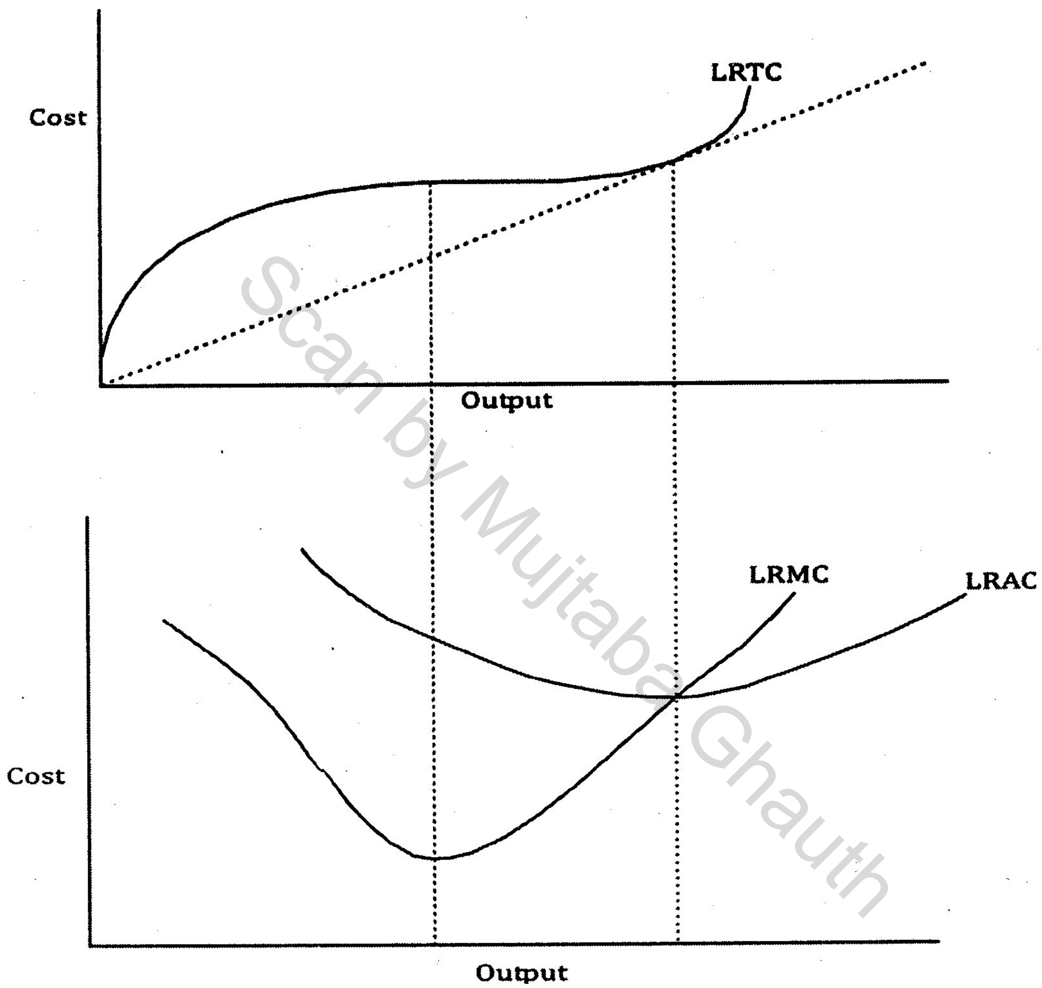
Long run is the period of time in which all resources and costs are variable and no resources or costs are fixed. Explain long run cost curve with the help of a graph. **(05)**

(ICMA Pakistan – Winter 2014)

LO 6: DERIVING LONG-RUN MARGINAL COST CURVE:

To derive LRMC, we shall begin by drawing LRTC and LRAC.

1. When the flattest tangent from origin meets LRTC, LRAC is at minimum.
2. When LRTC is flat, LRMC is at minimum.
3. LRMC will cut LRAC from below at minimum of LRAC.



PART B

MULTIPLE CHOICE QUESTIONS

Which of the following is not a factor of production?
(a) Land
(b) Labour
(c) Money
(d) Entrepreneurship

Which of the following is not an economic resource?
(a) Air
(b) Drinking Water
(c) Sulphuric acid
(d) Books

The curvature of Production Possibility Curve is due to:
(a) Increase in resources
(b) Decrease in demand
(c) Change in opportunity cost
(d) Decrease in supply

Which of the following is NOT a measure of income earned by a factor of production?
(a) Rent
(b) Interest
(c) Profits
(d) Taxes

Which of the following is a basic economic problem?
(a) Lower incomes and higher taxes
(b) Unemployment and inflation
(c) Unlimited wants and scarce resources
(d) Balance of payment deficits and recession

Which of the following is more likely to be found in a free market economy than in a planned economy?
(a) An even distribution of wealth
(b) An incentive to innovate
(c) Production of goods for benefit of society as a whole
(d) Full employment of labour

The production possibility frontier is concave to the origin because:
(a) in order to produce one good, resources must be diverted from the other
(b) some resources are better at producing one good and some resources are good at producing other good
(c) there is always some level of unemployment
(d) all resources contribute towards production equally

In which of the following options consumer sovereignty is in the order of highest to lowest?
(a) Market economy, mixed economy, planned economy
(b) Mixed economy, market economy, planned economy
(c) Market economy, planned economy, mixed economy
(d) None of the above

Which of the following statements relate to normative aspect of economics?
(a) Government should provide basic health care to all citizens
(b) Government-provided health care increases public expenditures
(c) Economists are paid more than the accountants
(d) Technology has great impact on productivity

Which of the following is NOT a basic question of economics?
(a) What will be produced?
(b) Who will produce it?
(c) For whom will it be produced?
(d) How will it be produced?

Keep in mind Production Possibility Frontier (PPF):
(a) All the points on the PPF could be efficient points
(b) Production may be chosen inside PPF which will be efficient
(c) Production out side the PPF is efficient
(d) None of these

Government's role in a modern economy is to:
(a) ensure efficiency.
(b) correct an unfair distribution of income.
(c) promote economic growth and stability.
(d) all of the above.

2. Which of the following is an appropriate economic goal for government in a mixed economy?
(a) Improving economic efficiency.
(b) Reducing economic inequality.
(c) Stabilizing the economy through macroeconomic policies.
(d) All of the above.

3. Land, labor, and capital are:
(a) available only in finite amounts.
(b) used to produce outputs.
(c) the primary factors of production.
(d) all of the above.

4. Which of the statements below does not apply to the production-possibility frontier, or PPF?
(a) The PPF is closely related to the concept of scarcity.
(b) Quantities of inputs are measured along the axes of the PPF.
(c) The PPF may shift over time.
(d) Movements along the PPF may occur as the allocation of resources changes.

5. Which of the following statements is false when an economy is on its *PPF?*
(a) More of one product cannot be produced without sacrificing some of the other.
(b) Resources are fully employed.
(c) Consumers will have all that they need.
(d) A strike by workers will move the economy beneath the *PPF.*

6. Which of the following statements could be used to explain an outward shift in the production-possibility frontier?
(a) There is an increase in technology.
(b) The population of the country increases.
(c) New natural resources are discovered under the ocean.
(d) All of the above apply.

7. The subject of economics includes:
(a) the study of wealth.
(b) the study of people in ordinary business life, earning and enjoying life.
(c) the study of the allocation of scarce resources to the production and distribution of goods and services.
(d) all of the above.

8. Economic policies can be designed to fight which of the following economic problems?
(a) Inflation.
(b) Unemployment.
(c) Trade imbalance.
(d) All of the above.

9. What is the best definition of an economic good?
(a) Goods that are very expensive.
(b) Goods that are in scarce or limited supply.
(c) Goods that a country produces and then trades to another county.
(d) Goods that are vital to an individual's welfare.

Which of the following may have been considered a free good today?
(a) Land.
(b) Cattle.
(c) Computers.
(d) Air.

The three questions of *what, how,* and *for whom:*
(a) relate to the three factors of production.
(b) exist because of scarcity.
(c) are more of a problem in a market economy.
(d) are more of a problem in a command economy.

When Saeed decides to not go to the concert, but goes to the library to study instead, he is:
(a) realizing that his time is a scarce resource that must be allocated.
(b) at least implicitly recognizing that the opportunity cost of going to the library is the concert he is giving up.
(c) making an economic decision.
(d) doing all of the above.

The economic role of government in mixed economies can include:
(a) provision of public goods.
(b) tax collections.
(c) income redistribution.
(d) all of the above.

4. If price is a signal in a market economy, what signal does it send to producers when the price of gasoline goes up?
(a) suppliers should produce more gasoline.
(b) government should decrease taxes on gasoline.
(c) government should place price controls on the market for gasoline.
(d) suppliers should produce less gasoline.

5. Capital is defined by economists as:
(a) money needed to run a business.
(b) the only factor of production.
(c) produced goods used for further production.
(d) private property.

36. Laissez-faire means what:
(a) more government regulation.
(b) leave us alone.
(c) don't be so lazy.
(d) kind of a county fair.

37. The philosophy of laissez-faire means that:
(a) government controls the economy through a central planning board.
(b) barter is used instead of money to make all transactions.
(c) the government uses taxing and spending policies to redistribute income and wealth.
(d) government interferes as little as possible in economic affairs.

38. * The mode of Islamic financing where a financial expert offers services for managing investment; and the investor and the expert share profits, is called:
(a) Ijara
(b) Mudaraba
(c) Musharaka
(d) Murabaha

39. * In deciding what products to produce, the central planners in a planned economy would give least priority to:
(a) size of economy's labour force
(b) production capabilities of the economy's factories
(c) consumer preferences
(d) type of raw materials produced by the economy

The demand for a Factor of Production is called:
- (a) quantity demand
- (b) derived demand
- (c) factor price
- (d) cost of production

The slope of a production possibility frontier is called:
- (a) marginal rate of substitution
- (b) marginal utility of product
- (c) marginal rate of transformation
- (d) marginal product

SUGGESTED SOLUTIONS					
MCQ #	**Correct Option**	**MCQ #**	**Correct Option**	**MCQ #**	**Correct Option**
1.	c	15.	b	29.	b
2.	c	16.	b	30.	d
3.	a	17.	a	31.	b
4.	d	18.	a	32.	d
5.	c	19.	b	33.	d
6.	a	20.	a	34.	a
7.	b	21.	d	35.	c
8.	c	22.	d	36.	b
9.	b	23.	d	37.	d
10.	c	24.	b	38.	b
11.	a	25.	c	39.	c
12.	c	26.	d	40.	b
13.	d	27.	d	41	c
14.	c	28.	d		

Chapter 2: Demand, Supply and Market Equilibrium

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

The demand for and supply of a good are in equilibrium. An indirect tax is levied on the good. Which one of the following will show the new equilibrium?
(a) A shift in the supply curve to the right
(b) A shift in the demand curve to the right
(c) A shift in the supply curve to the left
(d) A shift in the demand curve to the left

All of the following are determinants of supply except:
(a) price
(b) income level
(c) level of technology
(d) indirect taxes

Demand curve slopes downward because of:
(a) Consumer indifference
(b) Elasticity of demand
(c) Law of diminishing marginal utility
(d) Inelastic demand

If peas and beans are substitutes of each other, an increase in the price of peas will:
(a) increase the quantity of beans demanded
(b) increase the price of beans and the quantity sold
(c) decrease the quantity of peas sold
(d) all of the above

During the year, a flood destroyed significant portion of agricultural land used to produce rice. What would be the short-run effect on supply diagram for rice?
(a) A movement down the existing supply curve
(b) A shift to the right of the supply curve
(c) A shift to the left of the supply curve
(d) A movement up the existing supply curve

A movement along a supply curve is caused by a:
(a) change in the unit price of the particular product
(b) change in the number of producers
(c) change in the level of technology
(d) change in supply of the particular product

If the government sets the maximum price of a product below the market equilibrium price, it would lead to:
(a) excess supply
(b) market equilibrium
(c) excess demand
(d) economies of scale

Which one of the following will NOT shift the demand curve for a normal good to the left?
(a) A fall in consumers incomes
(b) A rise in the price of the normal good
(c) A rise in the price of a complementary good
(d) A fall in the price of the substitute good

If the demand equation for a good is Qd = 20 – P and the supply equation is Qs = 6 + 1.5 P and the price is set equal to 2.4 above the equilibrium level, there will be an excess:
(a) demand of 6 units
(b) supply of 6 units
(c) demand of 12 units
(d) supply of 18 units

The supply curve would shift to the left when:
(a) price of good goes down
(b) taxes of government go down
(c) prices of substitute goods go down
(d) prices of complements go down

Which of the following is held constant along the demand curve?
(a) Price
(b) Quantity
(c) Income
(d) Both (a) and (b)

Demand curve in case of Giffen good is:
(a) Negatively sloped
(b) Vertical
(c) Positively sloped
(d) None of these

Normal goods experience an increase in consumption when:
(a) real income increase
(b) real income falls
(c) price rises
(d) tastes change

Ceteris paribus is a Latin term meaning:
(a) "one by one"
(b) "equal under the law."
(c) "other things being equal."
(d) "in accordance with the law."

What should be the effect of a tax on the price received and the quantity supplied by firm?
(a) Price up and quantity up
(b) Price up and quantity down
(c) Price down and quantity up
(d) Price down and quantity down
(e) Price and quantity remain unchanged

A demand curve shows the relationship between the quantity demanded for a commodity over a given time and:
(a) The tastes of consumer.
(b) The money income of consumer
(c) The price of related commodities
(d) The price of the commodity

A supply schedule shows the relationship between the quantity supplied of a commodity over a given time and:
(a) Factor prices
(b) Technology
(c) Both (a) and (b)
(d) The price of the commodity

The intersection of market demand and supply curves for a given commodity determines
(a) The equilibrium price of the commodity
(b) The equilibrium quantity of the commodity
(c) The point of neither surplus nor shortage for the commodity
(d) All of these

** Increase in the number of buyers in the market would lead to a shift of the demand curve to:
(a) the right
(b) the left
(c) upwards along the curse
(d) None of the above

** In supply of and Demand for a product, an increase in production costs will shift:
(a) Demand Curve to the left
(b) Supply Curve to the right
(c) Demand Curve to the right
(d) Supply Curve to the left

** When a demand schedule is drawn up, which of the following is not held constant?
(a) Price of substitutes
(b) The price of the goods
(c) Price of Complementary goods
(d) None of the above

** Which cause the demand curve for a good to shift to the right.
(a) Decrease in the cost of production,
(b) A fall in the price of the good.
(c) An increase in the price of a complimentary good
(d) An increase in the price of a close substitute good.

A fall in the demand for commodity X can be caused by
(a) a fall in the price of a substitute.
(b) a fall in the price of a complement.
(c) a rise in the price of a substitute.
(d) a redistribution of income to groups who favor this commodity.

As the price of airline tickets increases, the:
(a) demand for airline tickets increases.
(b) supply of airline tickets decreases.
(c) quantity of tickets demanded decreases.
(d) quantity of tickets supplied decreases.

The law of downward-sloping demand holds that:
(a) a surplus of goods will cause price to fall.
(b) people normally buy more of a good as their incomes rise.
(c) the quantity of a good that consumers willingly purchase increases as the price of the good falls.
(d) the quantity of a good purchased will decrease if it goes out of style or is replaced by something of better quality.

Suppose that the demand curve for commodity *X* shifts to the left. One reasonable explanation for this shift would be:
(a) the supply of *X* has decreased for some reason.
(b) the price of *X* has increased, so people have decided to buy less of it than they did before.
(c) consumer tastes have shifted in favor of this commodity, and they want to buy more of it than they did before.
(d) the price of *X* has fallen, so people have decided to buy more of it than they did before.
(e) none of these events.

Four of the five events described below might reasonably explain why the demand for beef has shifted to a new position. Which one is not a suitable explanation?
(a) The price of some good which consumers regard as a substitute for beef has risen.
(b) The price of beef has fallen.
(c) Money incomes of beef consumers have increased.
(d) A widespread advertising campaign is undertaken by the producers of beef.
(e) There is a change in people's tastes with respect to beef.

When applied to the demand for commodity *X* the phrase "other things equal," or "other things constant," means that:
- (a) the price of *X* is held constant.
- (b) both buyer incomes and the price of *X* are held constant.
- (c) buyer incomes, tastes, and the price of *X* are held constant.
- (d) all factors that might influence the demand for *X* including the price of *X* are held constant.
- (e) none of the above.

If IBM and Compaq computers are substitutes, a decrease in the price of IBM PCs will cause:
- (a) an increase in the demand for Compaq computers.
- (b) an increase in the demand for IBM computers.
- (c) an increase in the supply of IBM computers.
- (d) an increase in the supply of Compaq computers.

The demand curve for a normal good will shift to the right if:
- (a) prices increase.
- (b) income increases.
- (c) cost of production increases.
- (d) none of the above.

The supply curve describes:
- (a) an inverse relationship between price and quantity supplied.
- (b) a direct relationship between income and quantity supplied.
- (c) an inverse relationship between consumption and savings.
- (d) a direct relationship between price and quantity supplied.

An increase in the cost of materials needed to produce snow skis causes the following change in the snow ski market:
- (a) the demand curve shifts to the right.
- (b) the supply curve shifts to the left.
- (c) both the demand and supply curves shift to the left.
- (d) neither curve shifts.

Consider the producer who makes leather shoes and leather purses. An increase in the price of leather shoes would cause:
- (a) a decrease in the supply of leather purses.
- (b) movement along the supply curve for purses.
- (c) a shift in the demand curve for leather shoes.
- (d) the supply curve for leather shoes and the supply curve for purses to shift to the left.

Which of the following will *not* help to determine the position of the supply curve?
- (a) Technology
- (b) Resource costs.
- (c) Consumer income.
- (d) Government taxes.

Equilibrium in a market indicates:
- (a) the price at which quantity supplied equals quantity demanded.
- (b) that every buyer who wants to buy can buy at the equilibrium price, and every seller who wants to sell can sell at the equilibrium price.
- (c) there is no tendency for price to change.
- (d) all of the above.
- (e) none of the above.

Let the initial price of a good be Rs. 5. If buyers wish to purchase 4000 units per week at that price while sellers wish to sell 5000 units per week, then:
- (a) price will tend to increase in the future.
- (b) price and output will tend to remain the same in the future.
- (c) price will tend to decrease in the future.
- (d) something is wrong—this could not happen.

37. If consumer income increases for a normal good, the equilibrium price of that commodity will:
   (a) increase.
   (b) decrease.
   (c) stay the same.
   (d) not enough information to answer the question.

38. An increase in price will lead to a lower quantity demanded because:
   (a) suppliers will supply only the smaller amount.
   (b) some individuals will no longer purchase the good.
   (c) individuals purchase less of the good.
   (d) b and c.

39. The demand curve for a normal good will shift to the left if:
   (a) income increases.
   (b) population increases
   (c) the price of a substitute good decreases.
   (d) none of the above.

40. According to the law of demand:
   (a) the intersection of demand and supply establishes the market equilibrium point.
   (b) consumers' tastes can influence the quantity demanded.
   (c) there is an inverse relationship between price and the quantity demanded.
   (d) there is a direct relationship between price and the quantity demanded.

41. When we say that a price in a competitive market is "too low to clear the market," we usually mean that:
   (a) the quantity supplied exceeds the quantity demanded at that price.
   (b) consumers are not willing to buy enough at that price.
   (c) the quantity demanded exceeds the quantity supplied at that price.
   (d) no producer can cover costs of production at that price.

42. Good growing conditions for wheat would probably
   (a) induce greater demand for wheat, yielding a higher price.
   (b) cause wheat suppliers to move up their supply curves to a higher price.
   (c) cause people to reduce their demand for wheat.
   (d) induce a rightward shift in wheat's supply curve.

43. The price of good X falls. The income-effect of this price change:
   (a) will usually cause X purchases to increase.
   (b) will usually cause X purchases to decrease.
   (c) may cause X purchases either to increase or decrease.
   (d) by definition, neither increases nor decreases X purchases.
   (e) will not apply, since income-effects refer to changes in spendable income, not to price changes.

44. The rise in the price of butter will lead to:
   (a) a leftward shift in the demand curve for butter.
   (b) a rightward shift in the demand curve for butter's substitute.
   (c) a leftward shift in the demand curve for butter's substitute.
   (d) none of the above.

45. Which ONE of the following will cause the demand curve for a good to move to the right (outwards from the origin)?
   (a) A decrease in the costs of producing the good
   (b) A fall in the price of the good
   (c) An increase in the price of a complementary good
   (d) An increase in the price of a close substitute good

46. When the price of a good is held above the equilibrium price, the result will be
   (a) excess demand
   (b) a shortage of the good
   (c) a surplus of the good
   (d) an increase in demand

47.* A price floor set above the market equilibrium price is likely to cause:
(a) excess supply
(b) excess demand
(c) a decrease in price and a decrease in the quantity traded
(d) an increase in price and an increase in the quantity traded

58. In a market economy, the short-run reaction to a shortage of a commodity after an increase in demand will be that:
(a) price will fall, but profits will increase.
(b) price will rise, but profits decrease.
(c) price will rise, but profits remain unchanged.
(d) price and profits will both rise.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	c	18.	d	35.	d
2.	b	19.	a	36.	c
3.	c	20.	d	37.	a
4.	d	21.	b	38.	d
5.	c	22.	d	39.	c
6.	a	23.	a	40.	c
7.	c	24.	c	41.	c
8.	b	25.	c	42.	d
9.	b	26.	e	43.	a
10.	d	27.	b	44.	b
11.	c	28.	e	45.	d
12.	c	29.	b	46.	c
13.	a	30.	b	47.	a
14.	c	31.	d	58.	d
15.	b	32.	b		
16.	d	33.	a		
17.	d	34.	c		

CHAPTER 3: DEMAND AND SUPPLY: ELASTICITIES

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* Which of the following products is likely to have the lowest price elasticity of demand?
   (a) salt
   (b) cars
   (c) houses
   (d) apples

2. If the market price of a product increases from Rs. 35 to Rs. 40 and in response, the quantity demanded decreases from 1400 units to 1200 units, the value of its price elasticity of demand (using point method) is:
   (a) 0.9
   (b) 1
   (c) 1.1
   (d) 1.2

3.* Which of the following has the most inelastic demand?
   (a) Fuel
   (b) Wheat
   (c) Meat
   (d) Sugar

4.* Over a long period of time:
   (a) demand becomes more elastic and supply becomes less elastic.
   (b) demand becomes less elastic and supply becomes more elastic.
   (c) both demand and supply becomes more elastic.
   (d) both demand and supply becomes less elastic.

5.* Production and employment in which of the following industries would be least affected by recession?
   (a) Sugar
   (b) Steel
   (c) Garments
   (d) Vehicles

6.* Which of the following is NOT a method for the measurement of price elasticity of demand?
   (a) Total outlay
   (b) Total savings
   (c) Point method
   (d) Arc method

7.* A firm with existing sales of 1,000,000 units per annum is planning to increase the price of a product from Rs. 100 to Rs. 120 per unit. If price elasticity of demand for that product is 1.25 (using point method), the sale of the firm after price increase would be:
   (a) 1,250,000 units
   (b) 750,000 units
   (c) 1,200,000 units
   (d) 800,000 units

8.* The price of a product is Rs. 3 and the quantity supplied is 10 units. When price is increased to Rs. 7 the quantity supplied increases to 12 units. The supply is:
   (a) perfectly elastic
   (b) elastic
   (c) inelastic
   (d) perfectly inelastic

9. ** Income elasticity of demand for an inferior good is:
   (a) Positive
   (b) Zero
   (c) Negative
   (d) None of these

10. ** When demand is elastic:
   (a) a fall in price is offset by an increase in quantity demanded, so that total revenue rises.
   (b) the good is probably a necessity, so price has little effect on quantity demanded
   (c) a rise in price will increase total revenue, even though less is sold.
   (d) buyers are not much influenced by prices of competing products

11. ** If the price elasticity of demand for product is 0.5, this means that:
   (a) a 1 percent change in price will change quantity demanded by 50%.
   (b) a 0.5 percent fall in price is associated with 1 percent increase in quantity demanded.
   (c) a 1 percent increase in price is associated with 0.5% fall in quantity demanded.
   (d) a 1 percent increase in price will cause a 0.5% increase in quantity demanded.

12. ** Price elasticity of demand for a commodity tends to be greater:
   (a) the more of a necessity it is
   (b) the more substitutes there are for it
   (c) over shorter time periods
   (d) the lower the price.

13. ** The % change in quantity demanded due to % change in income is:
   (a) Price elasticity
   (b) Prices cross elasticity
   (c) Income elasticity
   (d) All of these

14. ** If the % change in quantity demanded is more than % change in price coefficient of price elasticity is:
   (a) > 1
   (b) < 1
   (c) =1
   (d) =Zero

15. ** If the coefficient of income elasticity is negative:
   (a) It is inferior good
   (b) It is normal good
   (c) It is luxury good
   (d) All of these

16. ** Two commodities are considered to be substitutes for each other if cross elasticity is
   (a) positive
   (b) negative
   (c) zero
   (d) none of these

17. ** A commodity is considered to be a "luxury" if its income elasticity is:
   (a) equal to one
   (b) greater than one
   (c) less than one
   (d) zero
   (e) None of these

18. ** Which of the following products will have an elastic demand:
   (a) Flour
   (b) Cloth
   (c) Honda City
   (d) None of these.

19. ** If the price elasticity for a product is -2, a 10 % fall in its price will;
   (a) Decrease total revenue by 20%
   (b) Increase quantity sold by 10%
   (c) Increase quantity sold by 20%.
   (d) increase total revenue by 20%

20. ** If demand is inelastic, which of the following statement is correct.
   (a) If price of the good rises, the total revenue earned will increase.
   (b) If price of the good rises, the total revenue earned will fall.
   (c) If price of the good falls, the total revenue earned will increase.
   (d) If price of the good falls, the total revenue earned is unaffected.

21. Which of the following observations would indicate that demand for a good is price-inelastic?
   (a) The good in question is more of a necessity than a luxury for most people.
   (b) There do not exist good substitutes for this good.
   (c) The time period allowed for responding to a change in price is very small.
   (d) All of the above.
   (e) None of the above.

22. A perfectly inelastic supply curve would be shown in the ordinary supply-and-demand graph as a:
   (a) vertical line.
   (b) horizontal line.
   (c) straight line, but neither horizontal nor vertical.
   (d) curved line.

23. A shift to the left of the demand curve for X together with a shift to the right of the supply curve for X tends to:
   (a) increase the price of X; the effect upon the quantity exchanged is indeterminate.
   (b) increase the price of X and to increase the quantity exchanged.
   (c) decrease the price of X and to decrease the quantity exchanged.
   (d) decrease the price of X; the effect upon quantity exchanged is indeterminate.

24. An increase in supply will lower price unless:
   (a) supply is perfectly price inelastic.
   (b) demand is perfectly price elastic.
   (c) it is followed by a reduction in quantity demanded.
   (d) demand is highly price inelastic.
   (e) both demand and supply are highly price inelastic.

25. If at a price of Rs. 10, quantity bought will be 5400 per day, and at Rs. 15, quantity bought will be 4600 per day, then the price elasticity of demand (using Arc method) is approximately:
   (a) 0.2.
   (b) 0.4.
   (c) 0.6.
   (d) 2.5.
   (e) 6.0.

26. How do companies use price elasticity to improve their business?
   (a) By separating customers into groups, companies can attract different groups with different prices.
   (b) Companies can force everyone to pay the same price regardless of demand.
   (c) Companies can ignore price elasticity, it cannot improve business.
   (d) Customers are all the same and price elasticity is the same for all of them.

27. A horizontal demand curve may be described as:
   (a) relatively price elastic.
   (b) perfectly price inelastic.
   (c) relatively price inelastic.
   (d) perfectly price elastic.

28. If the elasticity coefficient of demand for coconuts is .40, then a 20% fall in price will result in:
 (a) a 20% rise in quantity demanded.
 (b) an 8% rise in quantity demanded.
 (c) a 200% rise in quantity demanded.
 (d) a 50% rise in quantity demanded.

29. A change in the supply of a given good could be caused by
 (a) a change in demand for the good.
 (b) a change in consumer preferences.
 (c) a change in technology that affects of production costs.
 (d) introduction of new consumers into the market.

30. The price elasticity of demand is the:
 (a) change in quantity demanded divided by the change in price.
 (b) change in price divided by the change in quantity demanded.
 (c) percentage change in price divided by the percentage change in quantity demanded.
 (d) percentage change in quantity demanded divided by the percentage change in price.

31. If a demand curve displays unitary elasticity, increase in price will:
 (a) raise total revenue.
 (b) lower total revenue.
 (c) have no effect on total revenue.
 (d) have an indeterminant effect on total revenue.

32. A cost cutting technical advance in the production of cars will cause:
 (a) the demand curve for cars to rise.
 (b) the demand curve for cars to fall.
 (c) no change in the supply of, or demand for cars.
 (d) a rightward shift in the supply curve of cars.
 (e) a leftward shift in the supply curve for cars.

33. Given a relatively, but not perfectly, price elastic supply curve, an increase in demand will certainly:
 (a) raise price but leave quantity sold unchanged.
 (b) raise price and increase quantity sold.
 (c) lower price, since supply cannot increase except through the inducement of higher price.
 (d) reduce quantity sold but leave price unchanged.
 (e) do none of the above, since "increase in demand" refers to a movement along a given demand curve.

34. If at a price of Rs. 8, the quantity of movie tickets bought will be 3300 per day, and at Rs. 12, the ticket quantity bought will be 2700 per day, then the price elasticity of demand (using Arc method) for movie tickets is approximately:
 (a) 0.4
 (b) 0.5
 (c) 0.7
 (d) 2.0
 (e) 2.5

35. Suppose that the income elasticity of demand for new houses is 2.3. If consumer incomes increase by 2 percent, you could expect the quantity of new houses to:
 (a) increase by 2.3 percent.
 (b) increase by 2 percent.
 (c) increase by 4.6 percent.
 (d) decrease by 1 percent.
 (e) decrease by 4.6 percent.

36. Suppose that when the price of Coke increases by 2 percent, the quantity of Jam-e-Shiree purchased increases by 4 percent. (Assume everything else is held fixed.) This means that the:
 (a) income elasticity of demand is 2 and the goods are complements.
 (b) cross price elasticity is 2 and the goods are substitutes.
 (c) cross price elasticity is -0.5 and the goods are complements.
 (d) price elasticity of demand for Coke is -2 and the goods are complements.
 (e) price elasticity of demand for Jam-e-Shiree is 0.5 and the goods are substitutes.

37. When only a small proportion of a consumer's income is spent on a good,
    (a) the demand for the good will be highly price elastic
    (b) the good is described as 'inferior'.
    (c) a rise in the price of the good will strongly encourage a search for substitutes
    (d) the demand for the good will be price inelastic

38. A shift to the right in the supply curve of a good, the demand remaining unchanged, will reduce its price to a greater degree
    (a) the more elastic the demand curve
    (b) the less elastic the demand curve
    (c) the nearer the elasticity of demand to unity
    (d) the more elastic the supply curve

39. Which statement is true of a curve with a constant slope?
    (a) It is a straight line
    (b) It is non linear
    (c) It runs parallel to Y-axis
    (d) It runs parallel to X-axis

40. If the price of a good fell by 10% and, as a result, total expenditure on the good **FELL** by 10%, the demand for the good would be described as
    (a) perfectly inelastic
    (b) perfectly elastic
    (c) unitary elastic
    (d) elastic

41. Which one of the following statements about the elasticity of supply is not true?
    (a) It tends to vary with time.
    (b) It is a measure of the responsiveness of supply to changes in price.
    (c) It is a measure of changes in supply due to greater efficiency.

42. A business, currently selling 10,000 units of its product per month, plans to reduce the retail price from £1 to £0.90. It knows from previous experience that the price elasticity of demand for this product is -1.5.
    Assuming no other changes, the sales which the business can now expect will be
    (a) 8,500 units
    (b) 9,000 units
    (c) 11,000 units
    (d) 11,500 units

43. If the demand for a good is price elastic, a fall in price will lead to
    (a) a rise in sales
    (b) a fall in sales
    (c) a rise in total expenditure on the good
    (d) a fall in total expenditure on the good

    Which of the above are correct?
    (a) (i) and (iii) only
    (b) (i) and (iv) only
    (c) (ii) and (iii) only
    (d) (ii) and (iv) only

44. Price elasticity coefficient of 0.2 implies that the %age change in quantity for a 5% change in price will be:
    (a) 0.2
    (b) 2.5
    (c) 5
    (d) 1

45. Assume that a fall in price of a commodity form Rs10 to Rs.9 per unit results in an increase in weekly sales from 100 units to 110 units. Price elasticity of demand would be:
    (a) 1.9
    (b) Unity
    (c) 2
    (d) Zero
    (e) 0.9
    (f) 0.1

46. Very small or zero Co-efficient of price elasticity of demand means that the good is:
    (a) a necessity
    (b) a comfort
    (c) a luxury
    (d) none of the above.

47. The standard measure for measuring demand and supply elasticity is
    (a) Zero
    (b) Unity
    (c) Infinity
    (d) Two

48. The income elasticity of demand for an income inferior good has an arithmetic sign.
    (a) Positive
    (b) Zero
    (c) Negative
    (d) No sign

49. From the demand schedule below, the price elasticity of demand following a fall in price from Rs 25 to Rs. 20 is:

Price (Rs.)	Quantity (units)
30	15
25	20
20	25
15	30

    (a) -1
    (b) -1.25
    (c) -1.50
    (d) -1.75

50. If the price of a good fell by 20% but total expenditure on the good remained the same, the demand curve could be described as
    (a) Perfectly elastic
    (b) Elastic
    (c) Perfectly inelastic
    (d) Unitary elasticity

51. Prices are most volatile when:
    (a) supply is elastic, demand is elastic
    (b) supply is inelastic, demand is inelastic
    (c) supply is elastic, demand is inelastic
    (d) supply is inelastic, demand is elastic

52*. If cross elasticity of demand between Goods X and Y is negative then:
    (a) the demand for both X and Y are price inelastic
    (b) X and Y are complements
    (c) X and Y are substitutes
    (d) the demand for both X and Y are price elastic

53. A shift to the right in the supply curve of a good, the demand remaining unchanged, will reduce its price to a greater degree
(a) the more elastic the demand curve
(b) the less elastic the demand curve
(c) the nearer the elasticity of demand to unity
(d) the more elastic the supply curve

54. Which statement is true of a curve with a constant slope?
(a) It is a straight line
(b) It is non linear
(c) It runs parallel to Y-axis
(d) It runs parallel to X-axis

55. If the price of a good fell by 10% and, as a result, total expenditure on the good FELL by 10%, the demand for the good would be described as
(a) perfectly inelastic
(b) perfectly elastic
(c) unitary elastic
(d) elastic

56. Which one of the following statements about the elasticity of supply is not true?
(a) It tends to vary with time.
(b) It is a measure of the responsiveness of supply to changes in price.
(c) It is a measure of changes in supply due to greater efficiency.
(d) It tends to be higher for manufactured goods than for primary products.

57. A business, currently selling 10,000 units of its product per month, plans to reduce the retail price from £1 to £0.90. It knows from previous experience that the price elasticity of demand for this product is -1.5.
Assuming no other changes, the sales which the business can now expect will be
(a) 8,500 units
(b) 9,000 units
(c) 11,000 units
(d) 11,500 units

58. From the demand schedule below, the price elasticity of demand following a fall in price from Rs 25 to Rs. 20 is:

Price (Rs.)	Quantity (units)
30	15
25	20
20	25
15	30

(a) -1
(b) -1.25
(c) -1.50
(d) -1.75

59. Price elasticity coefficient of 0.2 implies that the %age change in quantity for a 5% change in price will be:
(a) 0.2
(b) 2.5
(c) 5
(d) 1

60. Assume that a fall in price of a commodity form Rs10 to Rs.9 per unit results in an increase in weekly sales from 100 units to 110 units. Price elasticity of demand would be:
(a) 1.9
(b) Unity
(c) 2
(d) Zero
(e) 0.9
(f) 0.1

61. The standard measure for measuring demand and supply elasticity is
    (a) Unity
    (b) Zero
    (c) Infinity
    (d) Two

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	a	23.	d	45.	b
2.	b	24.	b	46.	a
3.	b	25.	b	47.	b
4.	c	26.	a	48.	c
5.	a	27.	d	49.	b
6.	b	28.	b	50.	d
7.	b	29.	c	51.	b
8.	c	30.	d	52.	b
9.	c	31.	c	53.	b
10.	a	32.	d	54.	a
11.	c	33.	b	55.	a
12.	b	34.	b	56	c
13.	c	35.	c	57	d
14.	a	36.	b	58	b
15.	a	37.	d	59	d
16.	a	38.	b	60	b
17.	b	39.	a	61	a
18.	c	40.	a		
19.	c	41.	c		
20.	a	42.	d		
21.	d	43.	a		
22.	a	44.	d		

CHAPTER 4: UTILITY ANALYSIS

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

Utility Analysis

1.* Which statement is true, in respect of every point on an indifference curve?
(a) the price of each good is the same
(b) the level of satisfaction is the same
(c) all of these statements are true
(d) none of these statements is true

2.* Which of the following best defines marginal utility?
(a) the change in total utility as a result of consuming an additional unit of a product
(b) the satisfaction of a want that results from consuming a good or service
(c) the ability to buy more of a product or service when real income increases
(d) the decrease in satisfaction that results from consuming an additional unit of a product

3.* Farhan has fixed income which he spends on only two goods i.e. X and Y. Farhan's total utility will be maximized when he distributes his total income in a manner that:
(a) average utility of last unit of X purchased is equal to the average utility of last unit of Y purchased
(b) marginal cost of last unit of X is equal to marginal cost of last unit of Y
(c) total utility of good X is equal to the total utility of good Y
(d) marginal utility of last unit of X purchased is equal to the marginal utility of last unit of Y purchased

4.** In case of two goods, following utility approach, a consumer is in equilibrium when:
(a) MUx/Px = MUy/Py
(b) MUx/Px < MUy/Py
(c) MUx/Mx > MUy/Py
(d) Both (b) and (c)

5.** The marginal utility of a good refers to the:
(a) total utility of the good prior to consumption of the last unit
(b) extra utility associated with consuming another unit of the good
(c) utility associated with consuming an alternative good
(d) consumer surplus associated with the consumption of an alternative good

6. If the marginal utility of a commodity is zero, then:
(a) the commodity in question has no utility;
(b) total utility for this commodity has reached a maximum.
(c) total utility for this commodity must be zero also.

7. The law of diminishing marginal utility states that:
(a) as the amount of a good consumed increases, the total utility of that good tends to diminish.
(b) as the amount of a good consumed decreases, the marginal utility of that good tends to diminish.
(c) as the amount of a good consumed increases, the marginal utility of that good tends to diminish.
(d) when the price of a good increases, marginal utility tends to diminish.

8. The equilibrium condition for a consumer who is spending all of his or her budget on two commodities, A and B, is given by:
(a) $MU_A = MU_B$
(b) $MU_A / P_B = MU_B / P_A$
(c) $MU_A / P_A = MU_B / P_B$
(d) $P_A = P_B$
(e) none of the above.

9. The price of good X is Rs. 1.50 and that of good Y, Rs. 1. A particular consumer who evaluates the marginal utility of Y to be 30 units, and is in equilibrium with respect to purchases of X and Y, must consider the marginal utility of X to be:
   (a) 15 units.
   (b) 20 units.
   (c) 30 units.
   (d) 45 units.
   (e) none of the above.

10.* A consumer with fixed income at his disposal would maximize his utility at a point where:
   (a) marginal utility per rupee from each good is same
   (b) marginal utility from each good is same
   (c) marginal utility from each good is maximized
   (d) marginal utility per rupee from each good is maximized

11. For the consumer to act rationally (i.e., achieve the greatest amount of satisfaction), he or she must:
   (a) maximize the sum of the marginal utilities of the last unit purchased of all goods in his or her budget.
   (b) equalize the marginal utilities of the last unit purchased of all commodities.
   (c) purchase no inferior goods.
   (d) equalize the marginal utilities of the last rupee spent upon each commodity or service purchased.
   (e) do none of the above.

Indifference Curve

12.* A movement along an indifference curve from left to right means that the consumer's:
   (a) Marginal utility has risen
   (b) Total utility is unchanged
   (c) Marginal utility has fallen
   (d) Money income is unchanged

13.* Which of the following is not a characteristic of Indifference Curve (IC)?
   (a) IC is negatively sloped
   (b) Higher IC curve signifies higher level of utility
   (c) ICs cannot intersect each other
   (d) IC is concave to the origin

14.** Price consumption curve in case of complementary goods is:
   (a) Downward sloping
   (b) Vertical
   (c) Upward sloping
   (d) None of these

15.** A basic assumption of the theory of consumption choice is that:
   (a) the consumer tries to get on the highest indifference curve
   (b) the consumer tries to get the most of good Y
   (c) the budget line is concave
   (d) none of these

16.** The substitution effect must always be:
   (a) positive
   (b) negative
   (c) zero
   (d) bigger than the income effect

17.** The income effect:
   (a) must always be negative
   (b) must always be positive
   (c) can be negative or positive
   (d) must be smaller than substitution effect

18. ** Indifference curves shows various combinations of:
(a) One commodity
(b) Two
(c) Three
(d) All of these.

19. ** The position of equilibrium of consumers due to changes in price of a commodity is known as:
(a) Price consumption curve
(b) Income consumption curve
(c) Production possibility curve
(d) none of these

20. You regard goods X and Y as substitutes. If the price of X rises and neither good is inferior, the *income effect* should induce you to purchase:
(a) less of good Y, and more of X.
(b) the same amount of Y.
(c) more Y and less X.
(d) none of the above.

21. The substitution effect says:
(a) when the price of a beef increases, consumers will tend to substitute with chicken.
(b) when the price of a beef increases, consumers will tend not to substitute.
(c) when the price of a beef increases, consumers will tend to eat more beef.
(d) when the price of a beef decreases, consumers will tend to substitute with chicken.

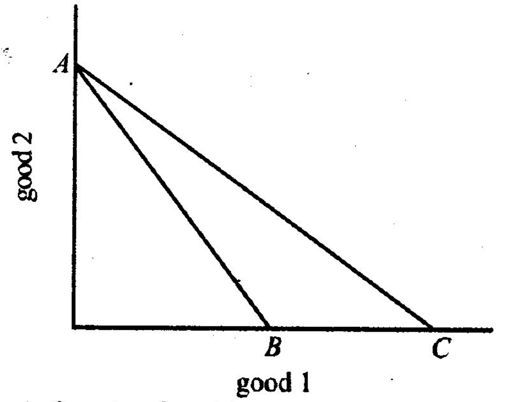
22. An indifference curve describes:
(a) combinations of two goods that cost the same amount of money.
(b) quantities of a good that are demanded at each alternative price level.
(c) combinations of two goods that bring the same amount of utility to the consumer.
(d) combinations of two goods that an economy can produce, given full employment and efficiency, stable technology and a fixed resource base.

23. The position and shape of any budget constraint are governed by:
(a) income of the consumer only.
(b) the prices of the goods purchased only.
(c) the prices of the goods purchased and by the amount of income available.
(d) the prices of the goods purchased and by the amount of income available and by the taste of the consumer.

24. One of the following four statements describing indifference-curve analysis is incorrect. Which one?
(a) Each point on a budget line stands for a different combination of two goods.
(b) All the points on an indifference curve stand for the same level of satisfaction.
(c) All the points on a budget line cost the same amount of money.
(d) All the points on an indifference curve cost the same amount of money.

25*. If the shape of an indifference curve is concave, it implies:
(a) diminishing marginal rate of substitution
(b) increasing marginal rate of substitution
(c) constant marginal rate of substitution
(d) none of these

26. As shown in the figure below a shift in the budget line from AB to AC represents:



(a) an increase in the price of good 1.
(b) an increase in the price of good 2.
(c) a decrease in the price of good 1.
(d) a decrease in the price of good 2
(e) none of the above.

27. Consumer equilibrium on an indifference map is at:
(a) any intersection of the budget line and an indifference curve.
(b) any point on the highest indifference curve shown on the indifference map.
(c) that point where the budget line is tangent to an indifference curve.
(d) any point inside the budget line.
(e) any point on the budget line.

28. A purpose of indifference-curve analysis is to:
(a) derive a theory of producer behavior.
(b) prove the law of diminishing utility.
(c) derive a theory of consumer behavior without requiring absolute utility measurement.
(d) prove that the demand curve for all commodities is negatively sloped.

29. Indifference curves are generally convex to the origin because of:
(a) the law of diminishing marginal utility.
(b) substitution and income effects.
(c) limitations of the economy in producing an ever-increasing amount of the commodities in question.
(d) the instability of individual human wants.
(e) none of the above.

30. With the principle of diminishing marginal utility in effect, increasing consumption will:
(a) lower total utility
(b) produce negative total utility
(c) lower marginal utility, and therefore total utility
(d) lower marginal utility, but may increase total utility

31. If all prices remain constant, an increase in income results in
(a) an increase in the slope of the budget line
(b) a decrease in the slope of the budget line
(c) an increase in the intercept of the budget line
(d) a decrease in the intercept of the budget line
(e) Both a and c

32. Marginal rate of substitution of X for Y along an ordinary indifference curve is:
(a) Diminishing
(b) Increasing
(c) Constant
(d) All of the above
(e) None of the above

33. The budget line of a consumer explains various combinations of two commodities that:
   (a) are actually purchased at market prices
   (b) can be purchased at market prices
   (c) equate consumers' expenditure to his money income
   (d) b and c above
   (e) None of the above.

SUGGESTED SOLUTIONS					
MCQ #	**Correct Option**	**MCQ #**	**Correct Option**	**MCQ #**	**Correct Option**
1.	b	12.	b	23.	c
2.	a	13.	d	24.	d
3.	d	14.	c	25.	b
4.	a	15.	a	26.	c
5.	b	16.	a	27.	c
6.	b	17.	c	28.	c
7.	c	18.	b	29.	a
8.	c	19.	a	30.	d
9.	d	20.	c	31.	c
10.	a	21.	a	32.	a
11.	d	22.	c	33.	d

CHAPTER 5: COSTS, REVENUES AND FIRMS

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* Under perfect market conditions, the supply curve of a firm is the same as:
(a) MC curve
(b) MR curve
(c) AR curve
(d) AC curve

2.* In a perfectly competitive market ________ is/are the price maker(s):
(a) the individual firm
(b) the industry
(c) a large number of consumers
(d) the trade association

3.* Which of the following is NOT included in the explicit costs of a firm?
(a) wages paid to labour
(b) interest paid for borrowed capital
(c) payments for purchases of materials
(d) normal profit

4.* As its output increases, a firm's short-run marginal cost will eventually increase because of:
(a) diseconomies of scale
(b) a lower product price
(c) the firm's need to break even
(d) diminishing returns

5.* A firm is operating in an industry where many firms are producing similar products.
Each firm is able to set prices of its products without affecting the market place as a whole. The firm is most likely operating in:
(a) monopoly
(b) oligopoly
(c) perfect competition
(d) monopolistic competition

6.* ABC Limited employs 100 skilled workers at a wage rate of Rs. 2,800 per week. To attract 10 more workers it raises the wage rate to Rs. 3,000 per week. The marginal cost of employing the extra workers is:
(a) Rs. 20,000
(b) Rs. 30,000
(c) Rs. 50,000
(d) Rs. 200

7. Which of the following are barriers to entry into a market:
(a) legal restrictions.
(b) high cost of entry.
(c) product differentiation.
(d) all of the above.

8.* Which of the following statement is correct with respect to relationship between the average cost curve and marginal cost?
(a) Average cost curve will slope downwards when marginal cost is less than average cost
(b) Average cost curve will slope upwards when marginal cost is less than average cost
(c) Average cost curve will slope downwards when marginal cost is more than average cost
(d) There is no direct relationship between average cost curve and marginal cost

9.* Which of the following will always increase when a manufacturing business increases its output?
(a) Fixed costs
(b) Marginal cost
(c) Total costs
(d) Average variable cost

10.* In the short run, a firm would stop production if:
(a) marginal cost were equal to marginal revenue
(b) total revenues were more than total costs
(c) total costs were equal to total revenues
(d) total revenues were less than total fixed costs

11.* Diseconomies of scale occur when:
(a) long run average costs begin to rise
(b) short run average costs begin to rise
(c) long run average costs begin to fall
(d) short run average costs begin to fall

12.* A firm that breaks even after all the economic costs are paid, is earning:
(a) Economic profit
(b) No profit
(c) Normal profit
(d) Supper normal profit

13.* The short-run average cost curve is:
(a) Upward sloping
(b) Downward sloping
(c) U shaped
(d) A straight line

14.* Increasing long-run average costs are associated with:
(a) Law of diminishing return
(b) Constant returns to scale
(c) Increasing returns to scale
(d) Decreasing returns to scale

15.* A profit maximising firm will produce output where:
(a) Total sales are maximised
(b) Average total costs are minimised
(c) Marginal cost equals marginal revenue
(d) Average revenue is maximized

16.* The productivity of an input is NOT affected by:
(a) Technological change
(b) Economies of scale
(c) Advances in knowledge
(d) Diminishing returns

17.* Which of these costs will increase or decrease with increase or decrease in production levels?
(a) Marginal cost
(b) Fixed cost
(c) Financial cost
(d) All of the above

18.* If marginal revenue is Rs. 50 and marginal cost is Rs. 40, the firm seeking profit maximization would:
(a) increase price
(b) reduce output
(c) reduce price
(d) increase output

19.* The demand curve for the product of a firm operating under conditions of perfect competition would be:
(a) identical to the marginal revenue
(b) intersecting the marginal revenue curve at the point where marginal cost is equal to marginal revenue
(c) intersecting the average variable cost curve at its lowest point
(d) perfectly inelastic

20.* Shahid has employed 25 workers to whom he pays wages at the rate of Rs. 150 per day. He is now intending to increase the wage rate of all workers by Rs. 20 per day in order to attract one additional worker. Given that all other costs remain constant, the marginal cost of labour per day would be:
(a) Rs. 20
(b) Rs. 170
(c) Rs. 670
(d) Rs. 4,420

21.* An industry is a group of firms:
(a) located in the same geographical area
(b) producing similar products
(c) which supply the various inputs needed to produce a final product
(d) owned by a corporation

22.* With 50 units of labour, a firm can produce 1,800 units of output. With 60 units of labour the firm can produce 2,100 units of output. The marginal product of labour (per unit) is:
(a) 0.33
(b) 3
(c) 30
(d) 300

23.* Which of the following would most likely result in failure of price cartel under oligopoly?
(a) Non-availability of close substitutes
(b) Existence of control over supply
(c) Price elasticity of demand is elastic
(d) Presence of agreement on allotted quota of supply

24.* Monopoly power may be based on:
(a) economies of large scale production
(b) patents
(c) control of key natural resources
(d) all of the above

25.* Which of the following is NOT a characteristic of monopolistic competition?
(a) Existence of many firms
(b) Barrier to entry or exit from the market
(c) Product differentiation
(d) Goods produced are close substitutes of one another

26.* Which of the following is the example of price discrimination?
(a) Peak and off-peak call charges
(b) A doctor charging higher consultancy fees in posh area
(c) Business and economy class flights
(d) Both (a) and (b)

27.* Which of the following is NOT a characteristic of oligopolies?
(a) Mutual dependence
(b) Growth through merger
(c) Large number of firms
(d) Non-price competition

28. * Identify the key element of a market structure:
   (a) Barriers to entry
   (b) Barriers to exit
   (c) Product differentiation
   (d) Number of firms

29. * Following data has been provided to the Chief Executive Officer of a monopoly firm:
   Marginal revenue Rs. 10 Marginal cost Rs. 11
   Average revenue Rs. 16 Average cost Rs. 12

   To maximise profit the firm should:
   (a) reduce price and increase output
   (b) reduce price and reduce output
   (c) increase price and increase output
   (d) increase price and reduce output

30. * Which one of the following is NOT a barrier to entry into a monopoly market?
   (a) Significant economies of scale
   (b) Heavy potential advertising costs
   (c) Large capital requirements
   (d) Constant returns to scale

31. A secret conversation between the presidents of Bethlehem Steel and USX Steel company to set prices would be an example of:
   (a) monopoly at work.
   (b) monopolistic competition at work.
   (c) collusive oligopolistic behavior.
   (d) perfect competition arranging one market price.

32. * Which of the following is NOT a feature of monopolistic competition?
   (a) Freedom of entry and exit to the industry
   (b) Downward sloping demand curve
   (c) Identical products
   (d) Many firms supplying the market

33. * Smart phones have become the latest craze. Everyone wants to have the smart phone and its sales are increasing. Therefore, the factory has increased production. This is an example of:
   (a) circular flow
   (b) due process
   (c) opportunity cost
   (d) consumer sovereignty

34. ** The firm's profit will be maximum when its:
   (a) Marginal cost is greater than marginal revenue
   (b) Marginal revenue is greater than marginal cost
   (c) Marginal cost is equal to marginal revenue
   (d) Both (a) and (b)

35. ** The firm's cost functions are determined by:
   (a) the price of its product
   (b) its assets
   (c) its production function
   (d) the age of the firm

36. ** When a firm is experiencing economies of scale:
   (a) the MP curve slopes upward
   (b) the LRAC curve slopes downward
   (c) diminishing returns to labor have been suspended
   (d) the MC curve slopes downward

37. ** In the theory of the firm, profit maximization is always synonymous with:
    - (a) profitability
    - (b) economic profit making
    - (c) maximization of the sales revenue
    - (d) both (a) and (c)
    - (e) none of these

38. ** In perfect competition if a firm maximizes profit, then equilibrium:
    - (a) MR=MC.
    - (b) AR = AC
    - (c) MR = AR = PRICE = MC
    - (d) ALL of these

39. ** A market is in equilibrium, when:
    - (a) AC = P
    - (b) MC = MR
    - (c) AC = AR
    - (d) TC = TR
    - (e) None of these

40. ** In the long run:
    - (a) fixed costs will be greater than variable costs
    - (b) variable costs will be greater than fixed costs
    - (c) all costs are variable costs
    - (d) none of the above

41. ** A competitive firm will maximize profits at the output where:
    - (a) the difference between price and marginal cost is highest
    - (b) price is higher than the average total cost by the largest amount
    - (c) total revenues and total costs are exactly equal
    - (d) none of the above

42. ** When AC is less than MC:
    - (a) An increase in output would cause AC to rise
    - (b) Fixed costs must be rising
    - (c) AC to fall
    - (d) Should not producer beyond minimum AC

43. ** The long run average cost curve is:
    - (a) U-shaped
    - (b) J-shaped
    - (c) Hyperbola shape
    - (d) Both (a) and (b)
    - (e) None of these

44. ** During perfect competition, the firm would earn a normal profit when:
    - (a) AC>AR
    - (b) AR<AC
    - (c) P=MP
    - (d) None of these

45. ** Demand curve in monopolistic competition is:
    - (a) Relatively flatter than monopoly
    - (b) Relatively steeper than monopoly
    - (c) Negatively sloped and same as monopoly
    - (d) None of these

46. ** A market with few entry barriers and with many firms that sell differentiated products is:
(a) Purely competitive
(b) Monopoly
(c) Monopolistically competitive
(d) Oligopolistic Competition

47. ** In case of perfect competition, the sellers are:
(a) Two
(b) A few
(c) Very large
(d) None of these

48. ** The following industry often is a natural monopoly:
(a) cigarette industry
(b) publishing industry
(c) drug industry
(d) electric power industry

49. Which of the following is not true about a collusive oligopoly?
(a) It is illegal.
(b) It tends to be unstable.
(c) It is economically efficient.
(d) It faces a downward sloping demand curve.

50. ** Monopolies arise as a consequence of:
(a) patents
(b) control over the supply of a basic input
(c) franchise
(d) all of these

51. ** A monopolistic firm will expand its output when:
(a) marginal revenue exceeds marginal cost
(b) marginal cost exceeds marginal revenue
(c) marginal cost equals marginal revenue
(d) marginal revenue is negative

52. ** In oligopoly market seller are:
(a) A Few
(b) Many
(c) One
(d) A large number

53. ** Monopoly market is characterized by:
(a) A large number of sellers
(b) Only one seller
(c) Thousands of seller
(d) All of these

54. ** If in a market the seller is charging different prices for the same commodity from different consumers, it is known as:
(a) Price discrimination
(b) Efficient selling
(c) Profit maximizer in Monopoly
(d) All of these

55. ** A monopolist gains more if:
(a) elasticity of demand for his product is low
(b) elasticity of demand for his product is high
(c) demand elasticity does not change.
(d) None of the above

56. ** Which of the following is often considered to be inconsistent with the theory of perfect competition?
    (a) large number of firms
    (b) free entry
    (c) complete mobility
    (d) none of the above

57. ** Which of the following is not a condition of perfect competition?
    (a) Inelastic Demand curve
    (b) single price
    (c) Uniform product
    (d) many buyers

58. A driver wishes to buy gasoline and have her car washed. She finds that the wash costs Rs. 3.00 when she buys 19 gallons at Rs. 1.00 each, but that if she buys 20 gallons, the car wash is free. Thus the marginal cost of the twentieth gallon of gas is:
    (a) -Rs. 2.00.
    (b) Rs. 0.00.
    (c) Rs. 1.00.
    (d) Rs. 2.00.

59. Price discrimination occurs when:
    (a) the same product is sold by a firm to different consumers for different prices.
    (b) consumers sell products to one another.
    (c) the same product is produced by a firm with different costs of production.
    (d) a firm charges the same price to consumers with different levels of income.

60. Which of the following is true if marginal cost is above average variable cost as output rises?
    (a) Average total cost must be falling.
    (b) Average fixed cost must be rising.
    (c) Average variable cost must be falling.
    (d) Average variable cost must be rising.

61. Which of the following is typically not U-shaped?
    (a) Average cost
    (b) Average variable cost
    (c) Average fixed cost
    (d) Marginal cost

62. At the quantity of output where average cost has reached its minimum level:
    (a) Marginal cost will equal average variable cost.
    (b) marginal cost will equal price.
    (c) marginal cost will equal average cost.
    (d) marginal cost will equal marginal revenue.

63. Which of the following are rules about the relation between average cost and marginal cost:
    (a) When marginal cost is below average cost, it is pulling average cost down.
    (b) When MC is above AC, it is pulling up AC.
    (c) When MC just equals AC, AC is constant.
    (d) All of the above.

64. Which of the following is true in industries characterized by a high degree of product differentiation?
    (a) Firms are under pressure to produce at maximum capacity.
    (b) Firms are not likely to emphasize price competition.
    (c) Relatively small firms are likely to be extremely rare.

65. Average product of labor measures:
    (a) the addition to total output when an additional worker is hired.
    (b) total product divided by total cost.
    (c) the marginal product of the last worker multiplied by the wage rate.
    (d) total product divided by the wage rate.
    (e) total product divided by the quantity of labor.

66. For the law of diminishing returns to hold, the missing blank in this table must be:

Quantity of Labor	Total Product
0	0
1	?
2	8

(a) 4.
(b) 2.
(c) more than 4.
(d) less than 4.
(e) 0.

67. Collusive oligopoly produces prices and quantities very similar to those produced by:
(a) perfect monopoly.
(b) monopolistic competition.
(c) perfect competition.
(d) noncollusive oligopoly.

68. If we increase all of our inputs on the farm and we get a proportional increase in output, this is an example of:
(a) Increasing returns to scale.
(b) Constant returns to scale.
(c) Decreasing returns to scale.
(d) Normal returns to scale.
(e) none of the above.

69. If we increase all of our inputs on the farm and we get a less-than- proportional increase in output, this is an example of:
(a) Increasing returns to scale.
(b) Constant returns to scale.
(c) Decreasing returns to scale.
(d) none of the above.

70. The short run is a period of time so short that:
(a) output cannot be varied.
(b) at least one input is fixed.
(c) all inputs are fixed.
(d) all inputs are variable.

71. A production function describes:
(a) how input prices change as the firm changes its output level.
(b) how much output you will get from a given amount of inputs.
(c) the level of output that firms should optimally produce at each price level.
(d) a relationship between prices and quantity demanded.
(e) all the above.

72. The law of diminishing returns is expressed in terms of an eventual decline in the:
(a) the total product of an input.
(b) average product of an input.
(c) marginal product of an input.
(d) returns to scale of an input.

73. The law of diminishing returns holds that:
(a) the total product of any input must eventually reach a maximum and fall as the employment of that input increases.
(b) the average product of any input must eventually reach a minimum and rise as the employment of all inputs increases proportionately.
(c) the marginal product of any input should eventually begin to decline as the employment of that input increases.
(d) the marginal product of any input should eventually begin to fall as the employment of all inputs increases proportionately
(e) the average product of any input should rise before it falls as the employment of that input increases.

74. All of the following characterize a perfectly competitive industry *except*:
    (a) there are many firms in the industry.
    (b) firms produce a homogeneous product; that is, any firm's product is a perfect substitute for any other's.
    (c) there is extreme price competition among the competitors in the industry
    (d) there is free entry and exit into and out of the industry

75. The profit-maximizing rule for a firm in perfect competition is "price equal to marginal cost." This rule means that a firm should:
    (a) increase output until price has risen to equal marginal cost.
    (b) increase output until price has fallen to equal marginal cost.
    (c) increase output until marginal cost has fallen to equal price.
    (d) increase output until marginal cost has risen to equal price.

76. Oligopoly means
    (a) one seller.
    (b) a few sellers.
    (c) large number of sellers
    (d) none of the above.

77. Because of a city tax reduction, the total fixed cost a firm must pay is reduced by Rs. 500 monthly. The firm operates in conditions of perfect competition. If the firm seeks to maximize its profit, this cost reduction should (at least in the short run) result in:
    (a) a reduction in price.
    (b) an increase in output.
    (c) a reduction in output.
    (d) no change in output or in price.

78. A firm operating in circumstances of perfect competition faces a market price of Rs. 10. It is producing 2000 units of output daily at a total cost of Rs. 19,000. This firm:
    (a) should increase its output to improve its profit position.
    (b) should reduce its output to improve its profit position.
    (c) may or may not be at the output level yielding maximum profit—the information furnished is not sufficient to cover this point.
    (d) is apparently now at its maximum-profit position.

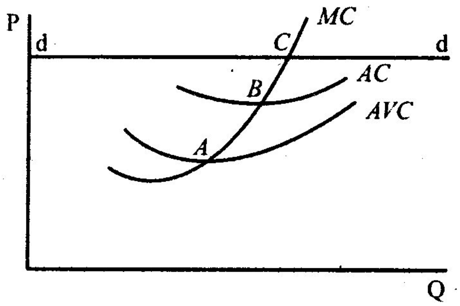
79. Economists refer to the "shutdown point" for a competitive firm in the short run. This shutdown point occurs at the output level where:
    (a) marginal cost (*MC*) equals average cost (*AC*).
    (b) average variable cost (*AVC*) equals average fixed cost (*AFC*).
    (c) *MC* equals *AVC*.
    (d) *AC* equals *AVC*.

80. If a firm is operating at the shutdown point in the short run, it is:
    (a) just covering all fixed cost.
    (b) just covering all cost.
    (c) just covering all variable cost.
    (d) just covering marginal cost.

81. If a firm is maximizing profits in the short run and total revenue is Rs. 1000, total cost is Rs. 1500, and total fixed cost is Rs. 400, the firm should:
    (a) shut down.
    (b) continue to operate in the short run but shut down in the long run.
    (c) continue to operate both in the short and long run.
    (d) not enough information is given to answer this question.

82. The long-run supply curve of an individual firm in perfect competition is the same thing as:
    (a) the rising segment of its marginal cost curve, above average cost.
    (b) the rising segment of its average cost curve.
    (c) its entire average cost curve.
    (d) that entire part of its total cost curve in which total cost rises or remains constant as output increases.

83. Which of the following statements is correct in reference to the figure below?



(a) B is the shutdown point.
(b) B is the profit-maximizing point.
(c) C is the zero-profit point.
(d) A is the shutdown point.

84. Which of the following would occur if a single farm in perfect competition lowered its price below the long-run equilibrium market price?
(a) All other farms would lower their prices, too.
(b) It would not be maximizing profit.
(c) It would get a larger share of the market, and this would be profitable for it.
(d) Other farms would be driven out of the industry.

85. Oligopolists differ from monopolists in that they:
(a) equate marginal revenue with average cost.
(b) equate marginal cost with a price read from a demand curve.
(c) face a competitor selling a similar product.
(d) maximize total revenue.

86. A supplier in a perfectly competitive market is characterized by all but which of the following?
(a) It can influence the price of its product.
(b) It produces such that marginal cost equals price.
(c) It can sell all it wants to at the prevailing market price.
(d) It produces a positive amount in the short run if it can recover variable costs.

87. Which of the following is true at the quantity of output where average cost (AC) has reached its minimum level?
(a) MC = AVC
(b) MC = AC
(c) AC = AFC
(d) P = AVC

88. In a market economy, the short-run reaction to an excess supply of a commodity after a decrease in demand is that the price will:
(a) rise, but profits fall.
(b) fall and profits will fall.
(c) fall, but profits will be unchanged.
(d) fall, but profits will increase.

89. If prices fall in a perfectly competitive industry, then the firms in that industry will in the short run:
(a) not decrease in number unless price falls below ATC for some firms.
(b) try to reduce production or shut down.
(c) keep output at the same level but make losses.
(d) advertise.
(e) both A and B.

90. If a firm in circumstances of perfect competition finds that, at its best possible operating position, total revenue is not sufficient to cover total variable costs, it should:
    (a) plan to shut down, even in the short run.
    (b) plan to continue operating permanently.
    (c) continue to operate if, at this same level of output, price per unit is sufficient to cover average cost.
    (d) increase the price it is charging.

91. The zero-profit point for a perfectly competitive firm occurs where the price equals the minimum point of the:
    (a) AVC curve.
    (b) AC curve.
    (c) MC curve.
    (d) AFC curve.

92. In long-run equilibrium, a firm in a perfectly competitive industry will produce at the point where:
    (a) marginal cost equals average total cost.
    (b) total revenue is maximized.
    (c) marginal cost equals average variable cost.
    (d) price equals average fixed cost.

93. The zero-profit price for a firm in perfect competition:
    (a) is a price just sufficient to cover fixed cost.
    (b) is at the point where total revenue from sales is at its minimum level.
    (c) occurs at the point where marginal and average cost are equal.
    (d) occurs at the point where marginal cost is at its minimum level.

94. When dealing with the economics of the business firm, the short run is defined as a period long enough to:
    (a) gather cost data but not production data.
    (b) vary output but not plant capacity.
    (c) vary output and plant capacity.
    (d) vary plant capacity but not output.

95. It will sometimes pay a firm to operate at a loss under perfect competition, so long as price covers:
    (a) average variable cost.
    (b) average cost.
    (c) marginal cost.
    (d) average fixed cost.

96. In a market economy, if you are only one of many wheat farmers you are considered a which of the following:
    (a) price-maker.
    (b) price-taker.
    (c) price manipulator.
    (d) price-neogiator.

97. The term *oligopoly* refers to:
    (a) general rubric for imperfect competition.
    (b) a situation in which the number of competing firms is large but the products differ slightly.
    (c) a situation in which the number of competing firms is small but greater than one.
    (d) the form of imperfect competition in which firms act like a monopoly, regardless of the number of firms or type of product.
    (e) none of these.

98. Economies of scale occur whenever a firm's:
    (a) marginal cost curve shifts.
    (b) total costs are rising.
    (c) patents are about to run out.
    (d) diminishing marginal returns have set in.
    (e) per unit production costs are falling in the long run.

99. A monopolist and a perfect competitor can both sell 10 units of a good they produce for Rs. 5 a piece. Which of the following is not true?
(a) The perfect competitor can sell unit 11 for Rs. 5.
(b) The perfect competitor's MR curve is a straight line at Rs. 5.
(c) The monopolist can sell unit 11 for Rs. 5.
(d) The monopolist has a decreasing marginal revenue curve.

100. Whenever the demand curve facing a given firm is perfectly elastic:
(a) the firm cannot be operating under conditions of perfect competition.
(b) the profit-maximizing rule which sets marginal cost equal to marginal revenue does not apply.
(c) price and marginal revenue are equal for every unit of output.
(d) price and marginal cost are equal for every unit of output.

101. If a profit-maximizing monopoly has reached its equilibrium position, then price:
(a) must be less than marginal cost.
(b) must be equal to marginal cost.
(c) must be greater than marginal cost.
(d) may be equal to or below marginal cost, but not above it.
(e) none of the above is necessarily correct, since equilibrium does not require any particular relation between price and marginal cost.

102. Marginal revenue could equal price for a profit-maximizing firm:
(a) only when an industry is an oligopoly.
(b) only when an industry is a monopoly.
(c) whenever firms are able to differentiate their products and gain some control over price.
(d) only when an industry is perfectly competitive.

103. At a profit maximizing point:
(a) profits are always positive.
(b) marginal revenue is 0.
(c) total revenue is maximized.
(d) none of the above.

104. Monopoloy power results in:
(a) a lower quantity than if the industry was perfectly competitive.
(b) a higher price than if the industry was perfectly competitive.
(c) a lower price than if the industry was perfectly competitive.
(d) both a and b.

105. OPEC represents a market structure most accurately represented by:
(a) the pure monopoly model.
(b) a collusive oligopoly model with incomplete market coverage.
(c) the monopolistic competition model.
(d) the duopoly model.

106. If we consider an industry composed of many sellers of differentiated products, and if entry into this industry is free, then we should expect the long-run equilibrium position of the typical firm in this industry to have which of the following properties?
(a) Average cost (*AC*) would be at its minimum possible level, and the price charged (*P*) would be equal to that *AC*.
(b) *AC* would be above its minimum level, and *P* would be above that *AC*.
(c) *AC* would be above its minimum level, and *P* would be equal to that *AC*.
(d) *AC* would be above its minimum level, but *P* would equal that minimum.

107. Collusive oligopoly produces prices and quantities very similar to those produced by:
(a) monopoly.
(b) monopolistic competition.
(c) perfect competition.
(d) none of the above

108. Under which of the following conditions could a firm successfully price discriminate?
   (a) the good is in high demand.
   (b) consumers have especially high income.
   (c) the industry is perfectly competitive
   (d) no possibility of resale.

109. If the price of a monopoly firm is located on the inelastic portion of its demand curve, to maximize profits it should necessarily:
   (a) increase output and decrease price.
   (b) decrease output and increase price.
   (c) increase output and increase price.
   (d) not change output or price.
   (e) do none of the above.

110. Which of the following describe the relationship between price elasticity of demand and marginal revenue?
   (a) marginal revenue is positive when demand is elastic.
   (b) marginal revenue is zero when demand is unit elastic.
   (c) marginal revenue is negative when demand is inelastic.
   (d) all of the above.

111. Imperfect competition can result in all of the following except:
   (a) less quantity than perfect competition.
   (b) a higher price than perfect competition.
   (c) more economic efficiency (i.e. less deadweight loss) than under perfect competition.
   (d) none of the above.

112. In the situation of imperfect competition, the relation between market price P and marginal revenue MR for each supplying firm is that:
   (a) P is less than MR at all or most output levels.
   (b) P is greater than MR at all or most output levels.
   (c) P is the same as MR at all output levels.
   (d) P is either less than MR at particular output levels or the same as MR.

113. If marginal revenue is 0:
   (a) total revenue is increasing.
   (b) total revenue is maximized.

114. Which of the following are examples of price discrimination?
   (a) a movie theater charges children less for tickets than is charged adults.
   (b) A pharmacy gives discounts to senior citizens.
   (c) An airline sets lower prices for passengers who stay over a Saturday night during their travels.
   (d) All of these are examples of price discrimination.

115. Monopolistic competition features:
   (a) many buyers and sellers.
   (b) easy entry and exit.
   (c) long term economic profits equal to zero.
   (d) all of the above.

116. A perfect competitor's output in the short run is the quantity that:
   (a) sets MC equal to MR = P.
   (b) sets AVC = P.
   (c) minimizes ATC.
   (d) sets ATC = P.
   (e) none of the above are correct.

117. A natural monopoly is:
   (a) a market in which the industry's output can be efficiently produced only by a single firm.
   (b) a market in which the industry's output is produced by a single firm.
   (c) a market where many sellers can produce the output.
   (d) none of the above.

118. If a firm finds that its marginal revenue exceeds its marginal cost, then the maximum profit rules require the firm to:
(a) increase its output in perfect, but not necessarily in imperfect competition.
(b) increase its output in imperfect, but not necessarily in perfect competition.
(c) increase its output in both perfect and imperfect competition.
(d) decrease its output in both perfect and imperfect competition.

SUGGESTED SOLUTIONS

MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	a	41.	c	81.	a
2.	b	42.	a	82.	a
3.	d	43.	a	83.	d
4.	d	44.	d	84.	b
5.	d	45.	a	85.	c
6.	c	46.	c	86.	a
7.	d	47.	c	87.	b
8.	a	48.	d	88.	b
9.	c	49.	c	89.	b
10.	a	50.	d	90.	a
11.	a	51.	a	91.	b
12.	c	52.	a	92.	a
13.	c	53.	b	93.	c
14.	d	54.	a	94.	b
15.	c	55.	a	95.	a
16.	d	56.	d	96.	b
17.	a	57.	a	97.	c
18.	d	58.	a	98.	e
19.	a	59.	a	99.	c
20.	c	60.	d	100.	c
21.	b	61.	c	101.	c
22.	c	62.	c	102.	d
23.	c	63.	d	103.	d
24.	d	64.	b	104.	d
25.	b	65.	e	105.	b
26.	d	66.	c	106.	c
27.	c	67.	a	107.	a
28.	d	68.	b	108.	d
29.	d	69.	c	109.	b
30.	d	70.	b	110.	d
31.	c	71.	b	111.	c
32.	c	72.	c	112.	b
33.	d	73.	c	113.	b
34.	c	74.	c	114.	d
35.	c	75.	d	115.	d
36.	b	76.	b	116.	a
37.	e	77.	d	117.	a
38.	d	78.	c	118.	c
39.	e	79.	c		
40.	c	80.	c		

CHAPTER 6: MACROECONOMICS: AN INTRODUCTION

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* The aggregate demand curve would shift to the right if:
   (a) government taxes increase
   (b) net exports increase
   (c) government spending decreases
   (d) the nominal money supply decreases

2.* Which of the following measures is NOT likely to boost a country's rate of economic growth?
   (a) Tax cuts
   (b) Tax rebates
   (c) Reduction in subsidies
   (d) Increase in government spending

3.* Which of the following are regarded as withdrawals from the circular flow of income?
   (a) saving and taxation
   (b) export and import
   (c) investment and saving
   (d) Government spending and borrowing

4.* Which of the following would decrease aggregate demand?
   (a) increased investment
   (b) increase in export revenue
   (c) increased taxation
   (d) increased consumption

5.* To counteract a recession, the Central Bank should:
   (a) raise the reserve requirement and the discount rate
   (b) sell securities on the open market and lower the discount rate
   (c) buy securities on the open market and raise the discount rate
   (d) buy securities on the open market and lower the discount rate

6.* Which one of the following is most likely to lead to a rise in aggregate demand?
   (a) Decrease in government expenditure
   (b) Decrease in income tax rate
   (c) Increase in autonomous savings
   (d) Increase in rate of interest

7.* Inflation will increase when:
   (a) aggregate demand increases faster than aggregate supply.
   (b) aggregate supply increases faster than aggregate demand.
   (c) aggregate demand falls.
   (d) both b and c.

8.* A deflationary gap exists in an economy when:
   (a) aggregate demand is less than the full employment level of income
   (b) injections exceed withdrawals at the full employment level of income
   (c) the government has a budget surplus
   (d) none of the above

9.* Which of the following policies help in increasing economic growth?
   (a) Increase in taxes
   (b) Increase in government spending
   (c) Reduction in subsidies
   (d) Wage freezes

10. * If a government were to pursue an expansionary monetary policy it would:
    (a) raise interest rates and sell securities
    (b) lower interest rates and sell securities
    (c) raise interest rates and buy securities
    (d) lower interest rates and buy securities

11. * Increase in Cash Reserve Ratio would:
    (a) Decrease prices
    (b) Reduce inflation
    (c) Control lending
    (d) All the above

12. * Which of the following is a tool of expansionary policy?
    (a) Increase taxes
    (b) Reduce subsidies
    (c) Allow tax rebates
    (d) Freeze wages

13. * While pursuing contractionary monetary policy, the government would:
    (a) raise interest rates and sell securities
    (b) lower interest rates and sell securities
    (c) raise interest rates and buy securities
    (d) lower interest rates and buy securities

14. * Long Run Aggregate Supply (LRAS) curve is a vertical line because it is:
    (a) dependent on price level and signifies the upper limit of the capacity in the economy
    (b) dependent on price level and signifies the lower limit of the capacity in the economy
    (c) independent of price level and signifies the upper limit of the capacity in the economy
    (d) independent of price level and signifies the lower limit of the capacity in the economy

15. * Which of the following is an example of contractionary monetary policy?
    (a) A decrease in spending on infrastructure
    (b) An increase in direct taxes
    (c) An increase in interest rates
    (d) A decrease in reserve to be maintained with central bank

16. * Which of the following is an objective of fiscal policy?
    (a) Zero inflation
    (b) Reduced money supply
    (c) Low exchange rates
    (d) Stable economic growth

17. Gross private domestic investment is calculated using all of the following statistics except:
    (a) investment in plant and durable equipment.
    (b) investment in residential construction.
    (c) increases in the value of goods in inventories.
    (d) depreciation costs.

18. * Along with the benefits, certain costs are also associated with economic growth. These include:
    (a) high unemployment
    (b) decrease in tax revenue
    (c) inflation
    (d) stagflation

19. * Aggregate supply increases due to increase in:
    (a) labour productivity
    (b) consumer spending
    (c) wage rate
    (d) interest rates

20.* The GDP deflator is the:
(a) Ratio of nominal GDP to real GDP multiplied by 100
(b) Ratio of real GDP to nominal GDP multiplied by 100
(c) Difference between real GDP and nominal GDP multiplied by 100
(d) Difference between nominal GDP and real GDP multiplied by 100

21.* Which of the following is NOT part of a country's Gross Domestic Product?
(a) Company profit
(b) Net income from abroad
(c) Salaries of school teacher
(d) Investment expenditure

22.* Which of the following is NOT a determinant factor in the rate of growth of a country's standard of living?
(a) Lowering of retirement age
(b) Capital investment
(c) Technological improvements
(d) Upgrading of educational standards at the university level

23.* GDP is equal to:
(a) the market value of all final goods and services produced during the course of the year.
(b) the sum of the incomes earned by suppliers of resources in the economy.
(c) the sum of value-added at all stages of production.
(d) all of the above.

24.* Which of the following statement is correct?
(a) Disposable Income is equal to consumption plus saving.
(b) Disposable Income is equal to personal income less personal taxes.
(c) Disposable Income is either spent on consumer goods and services or saved.
(d) All of the above.

25.* Consider the following with reference to circular flow of national income:
(a) subsidy on agricultural produce
(b) import of capital goods
(c) export of consumer goods
(d) levy of withholding tax

Which of the above represent injections into the circular flow of national income:
(a) (A) and (B) only
(b) (B) and (D) only
(c) (A) and (C) only
(d) (C) and (D) only

26.* Which of the following constitute(s) injection into the circular flow of income?
(a) Investments by businesses
(b) Government expenditures on goods and services
(c) The value of exports
(d) All of the above

27.* The difference between GDP and GNP consists of:
(a) Consumption of fixed capital
(b) Indirect business taxes
(c) Public and private transfer payments
(d) Net foreign factor income

28.* To transform GDP from market prices to basic prices it is necessary to:
(a) Exclude imports
(b) Subtract taxes and subsidies
(c) Subtract taxes and add subsidies
(d) Add income from abroad

29.* Net National Product (NNP) can be arrived at from Gross National Product (GNP) by:
(a) deducting depreciation
(b) adding indirect taxes
(c) deducting indirect taxes and adding depreciation
(d) adding depreciation

30.* Which of the following represents a withdrawal from the circular flow of national income?
(a) A rise in consumption
(b) A deficit on the balance of trade
(c) A surplus on the balance of trade
(d) A rise in public investment

31.* Assume that in 2017 the nominal gross domestic product of a country is Rs. 500 billion and the price index is 200. If the price index was 150 in 2010 what would be the real gross domestic product of the country in 2017 computed in terms of 2010 prices?
(a) Rs. 125 billion
(b) Rs. 166.67 billion
(c) Rs. 375 billion
(d) Rs. 666.7 billion

32.* Consider the following data for a country:

	Rs. in billion
Consumer expenditure	250
Government expenditure	500
Imports	100
Taxes	20
Depreciation	5

Based on the above data, the aggregate demand for the economy would be:
(a) Rs. 625 billion
(b) Rs. 850 billion
(c) Rs. 650 billion
(d) Rs. 825 billion

33.** Actual GDP may exceed potential GDP for a short period of time when:
(a) the unemployment rate is high
(b) plants run extra shifts that ordinarily are not scheduled.
(c) plants are shut down to remove old equipment and install new equipment
(d) any or all of the above occur.

34.** When economists speak of investment, they are speaking of:
(a) The part of GDP used by households for current use.
(b) The part of GDP, past and present, that has been set aside to add to productive capacity.
(c) The part of GDP that the government devotes to the construction of roads, airports, and the like.
(d) The part of GDP used by business to add to productive capacity, and by households to add to their stock of new houses.

35.** Monetary policy that results in lowering interest rate is:
(a) Contractionary
(b) Expansionary
(c) Moderate
(d) deflationary

36.** Which one of the following would cause a fall in the level of aggregate demand in the economy.
(a) a decrease in the level of imports
(b) a fall in the propensity In save
(c) a decrease in government expenditure
(d) a decrease in the level of income lax

37. ** Which of the following is not part of aggregate demand?
(a) Investment
(b) Govt. Spending
(c) net exports
(d) Taxes

38. ** Net exports are always:
(a) Positive
(b) Negative
(c) Balance
(d) None of these

39. ** Per Capita Income is calculated as:
(a) N.I+Population
(b) N.I.*Population
(c) N.I/Population
(d) Both (a) and (c)

40. ** Gross Domestic Product equals:
(a) GNP – NFI
(b) GNP + NFI
(c) GNP – indirect taxes
(d) Both (a) and (c)

41. ** Disposable income is:
(a) the same as personal income
(b) income that is used only for consumption
(c) Personal income remaining after income taxes
(d) exclusive of social security payments or welfare.

42. ** The difference between GNP and GDP is:
(a) net factor payments to foreigners
(b) indirect business taxes paid to all levels of government
(c) net exports of goods and services.
(d) capital consumption allowances.

43. ** A country that makes large net income payments to investors in another country is likely to:
(a) have a large GDP than GNP
(b) have smaller GDP than GNP
(c) grow slower economically than the other country
(d) grow faster economically than the other country.

44. ** Which of the following would be the best measure of changes in the standard of living in an economy, expressed in a time series?
(a) real GDP
(b) output per labor hour of output
(c) real GDP per capita
(d) nominal GDP per capita

45. ** Disposable income is:
(a) Income less taxes
(b) Income less Direct taxes
(c) Income less indirect taxes
(d) All of these

46. ** Most important economic indicator of the health of an economy is:
(a) Income per capita
(b) National output
(c) Literacy rate
(d) None of the above

47. ** Which one of the following is a transfer payment in National income accounting
   (a) Educational scholarships
   (b) Salaries of employees
   (c) Payments for text books
   (d) Payment for examination fee

48. * When the national income is in equilibrium, an increase in investment causes the equilibrium to change. Which change of equivalent value would bring national income to its original equilibrium level?
   (a) Decrease in government spending
   (b) Increase in government spending
   (c) Decrease in government taxes
   (d) Increase in exports

49. ** If capital consumption is greater than gross investment
   (a) Gross investment must be negative
   (b) Gross investment must be declining
   (c) Net investment is negative
   (d) replacement investment is rising

50. ** An increase in disposable income:
   (a) increases demand of economic good
   (b) reduces demand economic good
   (c) reduces spending
   (d) has no effect on economy

51. ** Real GDP refers to:
   (a) GDP, at constant prices
   (b) GDP, at current prices over time
   (c) GDP, at nominal prices over time
   (d) None of the above

52. The objective of stable prices can, in the view of at least some economists, be tackled by adjustments in:
   (a) fiscal policy.
   (b) monetary policy.
   (c) all the above.
   (d) none of the above.

53. The main difference between a recession and a depression is that:
   (a) depressions usually precede recessions.
   (b) unemployment is higher and lasts longer during a depression.
   (c) recessions are considered part of the business cycle, while depressions are not.
   (d) economic forecasters do a better job of predicting depressions.

54. Policies directed at stimulating exports can influence:
   (a) the domestic employment picture.
   (b) the growth of actual GDP relative to potential GDP.
   (c) the foreign trade balance.
   (d) all of the above.

55. The Consumer Price Index this year is 135 versus last year's 125: we have experienced X inflation. How much inflation does X stand for?
   (a) 10 percent inflation
   (b) 8 percent inflation
   (c) 7.4 percent inflation
   (d) 10 percent deflation
   (e) 7.4 percent deflation

6. Potential output is the:
   (a) level of output that is consistent with zero percent unemployment.
   (b) level of output that is consistent with the lowest sustainable unemployment rate.
   (c) highest level of output that is consistent with stable prices in the economy.
   (d) choices B and C.

7. Real GDP is calculated by:
   (a) multiplying nominal GDP by the GDP deflator.
   (b) dividing nominal GDP by the GDP deflator.
   (c) evaluating current output at base year prices.
   (d) both B and C.

8. If the level of aggregate demand were greater than the level of aggregate supply in the economy, which of the following choices could also be seen?
   (a) A depletion of inventories.
   (b) An increase in recruiting worker efforts.
   (c) An upward movement of the price level.
   (d) Requests for wage increases.
   (e) All of the above.

9. Growth in potential GDP is usually represented by:
   (a) a shift in the aggregate demand curve up slightly and to the right.
   (b) a shift in the aggregate demand curve up slightly and to the left.
   (c) a shift in the aggregate supply curve to the right.
   (d) a shift in the aggregate supply curve to the left.

60. A recession phase of the usual business cycle can be most appropriately represented as:
   (a) an outward shift in the aggregate demand curve.
   (b) a downward shift in the aggregate demand curve.
   (c) an upward shift in the aggregate supply curve.
   (d) a downward shift in the aggregate supply curve.

61. Which of the following items is NOT part of fiscal policy?
   (a) Government purchases of goods and services.
   (b) The money supply.
   (c) Taxes.
   (d) Government borrowing by selling bonds.

62. Potential output in the economy is determined by:
   (a) the availability of productive inputs.
   (b) managerial and technical efficiency.
   (c) all of the above.
   (d) none of the above.

63. The GDP gap is measured as the difference between:
   (a) the inflation and unemployment rates.
   (b) AD and AS at a particular price level.
   (c) potential and actual GDP.
   (d) nominal and real GDP.

64. Which of the following most accurately describes a recession?
   (a) a period of significant decline in total output, income, and employment, usually lasing more than a few months and marked by widespread contractions in many sectors of the economy.
   (b) a period of slight decline in employment, usually lasing only a few months.
   (c) a period of significant decline in total output, income, and employment, usually lasing more than a few years and marked by widespread contractions in many sectors of the economy.
   (d) a period of decline in total output, usually lasing more than a few months and marked by contractions in one or two sectors of the economy.

65. If GDP is falling and GNP is rising, which of the following statements is true?
    (a) The country is experiencing deflation.
    (b) The country is producing fewer products overseas and foreigners are producing more in the country.
    (c) The country is producing more products overseas and foreigners are producing less in the country.
    (d) The country is borrowing money from foreigners.

66. The ups and downs of real GDP are called:
    (a) statistical errors.
    (b) business cycles.
    (c) the Phillips curve.
    (d) consumption wave patterns.

67. Potential GDP is:
    (a) the total value of goods and services measured at current prices.
    (b) the total value of goods and services that could be produced at full employment.
    (c) the total value of goods and services measured at prices corrected for inflation.
    (d) none of the above.

68. If an economy consumes more than it produces, then:
    (a) imports must exceed exports.
    (b) depreciation must exceed consumption.
    (c) government spending must exceed government tax revenues.
    (d) no economy can be consuming more than it is producing.

69. Attempts by the Federal Reserve to restrict the money supply often result in:
    (a) an increase in business investment.
    (b) a rise in the Labor Force Participation Rate.
    (c) a rise in GDP.
    (d) a rise in interest rates.

70. Which is a tool of fiscal policy?
    (a) Wage and price controls.
    (b) Government expenditures.
    (c) Control of the money supply.
    (d) Control of the exchange rate.
    (e) None of the above.

71. Which of the following is likely to happen during wartime?
    (a) An increase in aggregate demand.
    (b) An increase in net exports.
    (c) An increase in aggregate supply.
    (d) An increase in prices.
    (e) A and D are correct.

72. One of the major approaches to output determination is the classical view. The classical view holds that:
    (a) prices and wages are fexible.
    (b) any excess supply or demand is quickly extinguished and full employment is established.
    (c) the Long-run AS curve is vertical.
    (d) All of the above.

73. Government transfer payments are basically defined as:
    (a) those which require service on the part of the recipient.
    (b) those for which the recipient gives no concurrent service in return.
    (c) receipts which do not increase the total purchasing power of all recipients.
    (d) that part of government expenditures on goods and services not financed by taxes.

74. That part of corporate profits included in Disposal Income is:
    (a) total corporate profits minus both corporate taxes and undistributed profits.
    (b) total corporate profits without any deduction.
    (c) total corporate profits minus corporation taxes.
    (d) total corporate profits minus undistributed profits.

75. In GDP statistics, investment includes:
    (a) any product produced for the government during the year in question.
    (b) any purchase of common stock issued during the year in question.
    (c) any increase in the amount of year-end inventories over inventories held at the beginning of the year in question.
    (d) any commodity bought by a consumer but not fully consumed by the end of the year in question.

76. The sum of all stages' value added in the production of a good:
    (a) exceeds the final selling price of that good.
    (b) equals the total cost of labor used in all stages of production.
    (c) equals the final selling price of that good minus profit.
    (d) equals the market price of that good.

77. One of the items listed below is *not* in the same class as the other three for purposes of national income accounting. Which one?
    (a) corporation income (or profits).
    (b) government transfer payments.
    (c) rental income.
    (d) wages and salaries.

78. If you want to compute disposable personal income from Net Domestic Product, then one thing you must *not* do is:
    (a) deduct depreciation.
    (b) add government transfer payments.
    (c) deduct indirect business taxes.
    (d) deduct undistributed corporation profits.

79. In computing the size of the government spending component of GDP, all government:
    (a) expenditures on commodities and services are counted.
    (b) expenditures on commodities are counted; those on services are not.
    (c) expenditures on final commodities and services are counted as well as all government transfer payments.
    (d) transfer payments are counted, but not expenditures on commodities or services.

80. The result of subtracting a depreciation allowance from GDP is:
    (a) personal income.
    (b) net domestic product.
    (c) yearly capital expenditure.
    (d) adjusted gross domestic product.

81. If nominal GDP was Rs. 360 (billion) in 1992 and if the price level rose by 20 percent from 1990 to 1992, then the 1992 GDP, measured in 1990 prices, was (in billions):
    (a) Rs. 300.
    (b) Rs. 320.
    (c) Rs. 340.
    (d) Rs. 360.
    (e) Rs. 432.

82. The consumer price index is in part based upon the share of income devoted to which of the following major categories?
    (a) shelter.
    (b) food.
    (c) medical expenses.
    (d) transportation expenses.
    (e) all of the above.

83. The income method and expenditure method:
    (a) provide a check for each other.
    (b) measure GDP two different ways.
    (c) would be identical in a world of complete information and perfect measurement.
    (d) all of the above.

84. The circular flow model of the economy:
    (a) cannot handle leakages from the spending flow.
    (b) is useful only when the economy is at full employment.
    (c) compares spending on goods and services with payments to factors of production.
    (d) compares consumer spending with corporate investment.

85. Value added is measured as the:
    (a) difference between a firm's sales and its purchases of materials and services from other firms.
    (b) difference between net and gross investment.
    (c) additional output the economy produces when it is at full employment.
    (d) increase in corporate profits from one year to the next.

86. When economists measure something in "real" terms, it means that:
    (a) physical goods are separated from intangible services.
    (b) data are collected from at least two sources before final measurements are made.
    (c) in GDP a distinction is made between financial capital and physical capital.
    (d) the data are adjusted to account for changes in prices from one period to the next.

87. "Double counting" would occur if NDP statisticians
    (a) used market prices without a correction for inflation.
    (b) included sales taxes in the market prices of goods and services.
    (c) added the costs of wood to the furniture maker along with the final price of the chairs.
    (d) added government expenditures on roads, and consumer expenditures on gasoline.

88. Disposable personal income includes:
    (a) corporate taxes.
    (b) undistributed corporate profits.
    (c) depreciation.
    (d) dividend payments.

89. Personal income equals disposable income plus:
    (a) personal income taxes.
    (b) transfer payments.
    (c) dividend payments.
    (d) personal savings.

90. Which of the following is not included in "investment"?
    (a) An increase in inventories.
    (b) The addition of a new wing to the factory.
    (c) The installation of new factory machinery.
    (d) The purchase of an old factory by a merging organization.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	b	32.	c	63.	c
2.	c	33.	b	64.	a
3.	a	34.	d	65.	c
4.	c	35.	b	66.	b
5.	d	36.	c	67.	b
6.	b	37.	d	68.	a
7.	a	38.	d	69.	d
8.	a	39.	c	70.	b
9.	b	40.	a	71.	e
10.	d	41.	c	72.	d
11.	d	42.	a	73.	b
12.	c	43.	b	74.	a
13.	a	44.	c	75.	c
14.	c	45.	b	76.	d
15.	c	46.	a	77.	b
16.	d	47.	a	78.	a
17.	d	48.	a	79.	a
18.	c	49.	c	80.	b
19.	a	50.	a	81.	a
20.	a	51.	a	82.	e
21.	a & b	52.	c	83.	d
22.	a	53.	b	84.	c
23.	d	54.	d	85.	a
24.	d	55.	b	86.	d
25.	c	56.	d	87.	c
26.	d	57.	d	88.	d
27.	d	58.	e	89.	a
28.	c	59.	c	90.	d
29.	a	60.	b		
30.	b	61.	b or d		
31.	c	62.	c		

CHAPTER 7: CONSUMPTION, SAVINGS AND INVESTMENT

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1. * The ratio of change in consumption to change in income is called:
   (a) Marginal propensity to consume
   (b) Average propensity to consume
   (c) Aggregate consumption
   (d) Consumption function

2. * The inverse relationship between rate of interest and level of investment is shown by:
   (a) supply curve
   (b) the marginal efficiency of capital curve
   (c) demand curve
   (d) indifference curve

3. * Which of the following is NOT a major determinant of the consumption function?
   (a) Political instability
   (b) Real income
   (c) Distribution of wealth
   (d) Changes in fiscal policy

4. * Induced investment is the investment which is:
   (a) income-inelastic
   (b) income-elastic
   (c) independent of profit
   (d) motivated by the well being of society

5. ** Sum of MPC and MPS equals:
   (a) 2
   (b) Less than 1
   (c) More than 1
   (d) 1

6. ** When Slope of the Aggregate Expenditure Curve increases; (Keynesian Cross model)
   (a) National Income will increase
   (b) National Income will decrease
   (c) There will be recessionary gap
   (d) There will be inflationary gap
   (e) None of these

7. ** The investment demand curve is always:
   (a) Negatively sloped
   (b) Positively sloped
   (c) Vertical
   (d) Horizontal

8. ** An MPC of less than 1 means that an increase in current disposable income would cause consumption expenditures to:
   (a) fall slightly because the increase in income will increase saving.
   (b) rise by the full increase in disposable income.
   (c) stay the same because the MPS is also less than 1.
   (d) rise by less than full increase in disposable income.

9. ** Counterpart of the intercept of consumption function is the intercept of:
   (a) import function
   (b) exports
   (c) saving function
   (d) X-M
   (e) None of these

10. The marginal propensity to consume is:
   (a) the ratio of total consumption to total income at any income level.
   (b) the change in income caused by a change (increase or decrease) in consumption spending.
   (c) a schedule showing the amount of consumption spending for each income level.
   (d) the ratio of a change in consumption to a change in income level at any income level.

11. The break-even point on a family's consumption function is the point at which:
   (a) its saving equals its income.
   (b) its income equals its consumption.
   (c) its saving equals its consumption.
   (d) its consumption equals its investment.
   (e) the marginal propensity to consume equals 1.

12. If people do not consume all their incomes and if they put the unspent amount into a bank, they are, in national income and product terms:
   (a) saving but not investing.
   (b) investing but not saving.
   (c) both saving and investing.
   (d) neither saving nor investing.

13.* The expectation of fall in prices would result in:
(a) shift of current consumption curve to the upward
(b) shift of current consumption curve to the downward
(c) no change on current consumption curve
(d) shift of current savings curve to the downward

14. A family spends Rs. 2000 on consumption when its income is 0, and Rs. 6000 on consumption when its income is Rs. 6000. Assume that its consumption function is a straight line. This family's marginal propensity to save is equal to:
   (a) 1/3.
   (b) 2/3.
   (c) 3/4.
   (d) 1/4.

15. As interest rates increase:
   (a) investment spending should increase.
   (b) investment spending should decrease.
   (c) the investment demand schedule should shift left.
   (d) the investment demand schedule should shift right.
   (e) consumption spending should increase.

16. Which of the following best describes the relationship between interest rates and the level of investment spending?
   (a) They are directly related to each other.
   (b) They are inversely related to each other.
   (c) They move together but in no discernible relationship.
   (d) They are unrelated.
   (e) None of the above.

17. The *accelerator principle* states that:
   (a) as the economy heats up, inflation increases.
   (b) as the pace of economic growth quickens, investment will increase.
   (c) as government spending increases, investment increases as well.
   (d) an increasing supply of money accelerates the growth of investment.
   (e) it is very difficult to slow down a rapidly growing economy.

18. We would move along the *demand-for-investment* schedule to a new level of investment spending if:
    (a) corporate profits taxes increased.
    (b) Congress passed an investment tax credit.
    (c) business managers became more optimistic about the future.
    (d) interest rates changed.

19. The major economic force(s) that determine investment is (are):
    (a) the revenues produced by investment.
    (b) the cost of investment.
    (c) the state of expectations about the future of the economy.
    (d) all of the above

20. Which of the following is NOT an important determinant of investment spending?
    (a) Firm revenues.
    (b) Interest rates.
    (c) Corporate taxes.
    (d) Business expectations.
    (e) All are important determinants.

21. Which of the following would be considered the major categories of consumption?
    (a) durable goods.
    (b) nondurable goods.
    (c) services.
    (d) all of the above.

22. Saving is performed:
    (a) by individuals, separately and collectively, for a variety of reasons.
    (b) to facilitate the formation of new capital.
    (c) by government, in the form of a budget deficit.
    (d) when an individual's MPS is greater than 1.

23. Which of the following describes the break-even point?
    (a) where a household neither saves nor dissaves but consumes all of its income.
    (b) where a household saves all of its income.
    (c) where a household dissaves and consumes more than its income.
    (d) where a household saves part of its income.

24. If your MPC is always 2/3, and your break-even point is Rs. 6000, then with Rs. 7200 of disposable income, your consumption will be exactly:
    (a) Rs. 6000
    (b) Rs. 7200
    (c) Rs. 9000
    (d) Rs. 6800

25. When the MPC is constant:
    (a) there is no break-even point; there is always positive saving.
    (b) the MPS is constant.
    (c) an increase in income decreases saving.
    (d) a doubling of income will double consumption.

26. When interest rates rise:
    (a) the cost of investing rises, and businesses buy less equipment and structures.
    (b) the return on investments rises also, and businesses eager to lock in future profits increase their investments.
    (c) consumers are encouraged to save, and the automatic relationship between savings and investment leads to an increase in investment.
    (d) businesses simply raise retail prices to reflect the increase in borrowing costs--there is no effect on level of investment.

27. An outward shift in the investment demand curve might suggest:
   (a) a decrease in the total output of the economy.
   (b) an increase in business taxation.
   (c) a change towards optimism in the expectations of investors.
   (d) a reduction in the costs of borrowing.

28. If real and nominal interest rates fall, then:
   (a) investment spending should fall, as well.
   (b) investment spending should rise.
   (c) consumption expenditure should fall as people save more.
   (d) the marginal propensity to save should rise, shifting the entire consumption schedule.
   (e) investment spending should rise primarily to take up the slack left by lower consumption expenditure.

29. Factors which affect consumption include:
   (a) disposable income.
   (b) wealth.
   (c) expectations.
   (d) all of the above.

30. Which of the following is not considered a category of investment in GDP?
   (a) Stock and bond purchases.
   (b) Purchases of plant and equipment.
   (c) Purchases adding to inventories.
   (d) Residential housing construction.

31. The investment demand curve depicts the relationship between:
   (a) Consumption and savings.
   (b) Investment and consumption.
   (c) Investment and interest rates.
   (d) Consumption and interest rates.

32. If household disposable personal income increases by Re. 1, we expect that consumption expenditures will:
   (a) increase by more than Re. 1.
   (b) increase, but by less than Re. 1.
   (c) remain unchanged.
   (d) decrease.

SUGGESTED SOLUTIONS					
MCQ #	**Correct Option**	**MCQ #**	**Correct Option**	**MCQ #**	**Correct Option**
1.	A	12.	a	23.	a
2.	B	13.	b	24.	d
3.	A	14.	a	25.	b
4.	B	15.	b	26.	a
5.	D	16.	b	27.	c
6.	A	17.	b	28.	b
7.	A	18.	d	29.	d
8.	D	19.	d	30.	a
9.	C	20.	e	31.	c
10.	D	21.	d	32.	b
11.	B	22.	a and b		

CHAPTER 8: MULTIPLIER AND ACCELERATOR

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1. * Which of the following factor is not used in the multiplier formula for the open economy?
   (a) marginal propensity to save
   (b) marginal propensity to import
   (c) marginal propensity to tax
   (d) marginal propensity to export

2. * The basic concept which underlies the accelerator theory of investment is:
   (a) investment depends on the level of savings
   (b) investment is inversely related to the rate of interest
   (c) investment is determined by the volume of commercial bank lending
   (d) investment in an economy is a function of output

3. * Which of the following situations would cause the value of the multiplier to fall?
   (a) A fall in the level of government expenditure
   (b) A rise in the marginal propensity to consume
   (c) A rise in the marginal propensity to save
   (d) A fall in business investment

4. * The concept of Multiplier discusses:
   (a) Savings and investments
   (b) Income and investments
   (c) Income and expenditure
   (d) Income and savings

5. * The multiplier measures the relationship between an increase in income caused by an increase in:
   (a) expenditures
   (b) investment
   (c) taxes
   (d) savings

6. * In a given economy, out of every additional Rs. 1,000 of national income, Rs. 200 is taken in taxes, Rs. 100 is spent on imports and Rs. 500 is spent on domestically produced goods. The multiplier is:
   (a) 1.25
   (b) 2
   (c) 2.5
   (d) 1.67

7. * If there is an increase in investment in an economy by Rs. 250 million and marginal propensity to consume is 3/4, then overall effect on the total output of the economy would be:
   (a) Rs. 1,000 million
   (b) Rs. 333.33 million
   (c) Rs. 187.50 million
   (d) Rs. 750 million

8. * Which of the following is correct?
   (a) People with low incomes have higher average propensity to spend
   (b) National income is said to be in an equilibrium when planned withdrawals from circular flow of national income are equal to planned injections into circular flow of national income
   (c) People with high incomes have higher average propensity to spend
   (d) Both (a) and (b)

9.* Assume that marginal propensity to consume out of disposable income is 0.8 and the rate of tax is 30% of total income. Under the simple Keynesian model, what would be the total change in national income if government increases public spending by Rs. 150 million?
(a) Rs. 187.5 million
(b) Rs. 300 million
(c) Rs. 450 million
(d) Rs. 750 million

10.** A pure number by which change in investment is multiplied to calculate change in income is called:
(a) Multiplier
(b) Accelerator
(c) Stabilizer
(d) All of these

11.** There is positive relationship between multiplier and:
(a) Marginal propensity to consume
(b) Marginal propensity to save
(c) Marginal efficiency of capital
(d) All of these.

12.** If MPC=2/3, the investment multiplier is:
(a) 2/3
(b) 1/3
(c) 3/2
(d) None of these

13. Assume that the following conditions hold:
- GDP is initially in equilibrium.
- The government then increases its total expenditure on goods and services by Rs. 2 billion.
- There is no increase at all in tax collection.
- The marginal propensity to consume is 0.75.

Assuming that there are no price-inflationary consequences in the new equilibrium thus produced, GDP will:
(a) rise by Rs. 2 billion.
(b) rise by Rs. 6 billion.
(c) rise by Rs. 8 billion.
(d) rise by Rs. 4 billion.

14. Suppose that business firms change their plans and increase the total of their spending on new plant and equipment. The basic multiplier model would lead us to expect:
(a) no change in GDP.
(b) GDP and consumer spending to rise.
(c) GDP to rise but consumer spending to be unaffected.
(d) GDP to rise but consumer spending to fall.

15. In the simplest Keynesian model with only consumption and investment contributing to aggregate demand, if the value of the marginal propensity to consume is 0.8, then the value of the multiplier must be:
(a) 1.25.
(b) 2.5.
(c) 4.0.
(d) 5.0.

16. A multiplier of 3 implies that when:
(a) consumption increases by Rs. 3, investment increases by Rs. 1.
(b) investment increases by Rs. 1, income increases by Rs. 3.
(c) investment increases by Rs. 1, income increases by Rs. 2 investment increases by Rs. 3, income increases by Rs. 1.
(d) income increases by Rs. 1, investment increases by Rs. 3.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	d	7.	a	13.	C
2.	d	8.	d	14.	b
3.	c	9.	B	15.	d
4.	b	10.	A	16.	b
5.	b	11.	A		
6.	b	12.	D		

CHAPTER 9: GROWTH AND TAXES

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* Which one of the following is NOT a feature of a good tax system?
(a) It should be equitable
(b) It should be economical
(c) The rate should be same for everybody
(d) It should be certain

2.* Fiscal deficit can be controlled by:
(a) increasing taxes
(b) reducing subsidies
(c) reducing public expenditure
(d) all of the above

3.* Fiscal deficit can be controlled by reducing:
(a) Taxes
(b) Imports
(c) Unemployment
(d) Public expenditure

4. A proportional tax is correctly defined as one in which (taking the taxpaying population overall, or in terms of the typical taxpayer):
(a) the ratio of tax collected to income received is the same at all income levels.
(b) about the same amount of tax is collected per taxpayer, regardless of taxpayer incomes.
(c) the percentage of tax falls as income climbs.
(d) the amount of money taken in tax rises as income falls.

5. Value-added taxes are:
(a) collected only at the sale of the final product.
(b) income taxes.
(c) based upon an ability-to-pay principle.
(d) collected at each stage of the production process.

6.* Which of the following is a direct tax?
(a) Federal excise duty
(b) Value added tax
(c) Sales tax
(d) Capital gains tax

7.* Crowding out is a result of:
(a) high government expenditure
(b) low government expenditure
(c) high taxes
(d) none of these

8.* Mohsin pays income tax of Rs. 2,500 on his earnings of Rs. 20,000. Danish pays Rs. 4,000 income tax on his earnings of Rs. 32,000. Kinza pays Rs. 5,000 income tax on her earnings of Rs. 40,000. The income tax system is:
(a) regressive
(b) proportional
(c) progressive
(d) equitable

9.* Murad pays a tax of Rs. 100 on his income of Rs. 1000 while Sohail pays a tax of Rs. 200 on his income of Rs. 800. Identify the tax system prevailing in the country.
(a) Progressive
(b) Regressive
(c) Proportional
(d) Equitable

10.** An increasingly higher marginal income tax is:
(a) progressive
(b) regressive
(c) proportional
(d) both (b) and (c)
(e) none of these

11.** Indirect Taxes are:
(a) Direct Taxes - Subsidies
(b) Subsidies
(c) Sales Taxes
(d) Income Taxes
(e) None of these

12.* Which of the following measures is likely to boost a country's rate of economic growth?
(a) Tax cuts
(b) Reduction in tax rebates
(c) Reduction in subsidies
(d) Decrease in government spending

13. As people's incomes rise, a progressive tax is best described as taking:
(a) an increasing amount of tax.
(b) the same percent of income as tax
(c) an increasing percent of income as tax.
(d) a decreasing percent of income as tax.

14. An example of a regressive tax is:
(a) the personal income tax.
(b) a general sales tax.
(c) the corporation income tax.
(d) the inheritance tax.

15. Which of the following is an example of a direct tax?
(a) Excise taxes.
(b) General sales taxes.
(c) Inheritance taxes.
(d) Tariffs.

SUGGESTED SOLUTIONS

MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	c	7.	a	13.	c
2.	d	8.	b	14.	b
3.	d	9.	b	15.	c
4.	a	10.	a		
5.	d	11.	c		
6.	d	12.	a		

CHAPTER 11: MONEY

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* On a short-run Phillips Curve, high rates of inflation coincide with:
   (a) low interest rates
   (b) high unemployment rates
   (c) low unemployment rates
   (d) low discount rates

2.* Which of the following would reduce inflation?
   (a) an increase in direct taxes
   (b) an increase in indirect taxes
   (c) increase in government spending
   (d) increase in income

3.* A prolonged and deep recession is called:
   (a) Hyperinflation
   (b) Depression
   (c) Stagflation
   (d) Great depression

4.* Unemployment arising from a long term decline in a particular industry causes an increase in:
   (a) structural unemployment.
   (b) seasonal unemployment.
   (c) frictional unemployment.
   (d) cyclical unemployment.

5.* Which of the following statement is correct?
   (a) A government can help to counter demand-pull inflation by reducing interest rate.
   (b) A government can help to counter cost-push inflation by limiting wage increase.
   (c) A government can help to counter cost-push inflation by increasing income tax rate.
   (d) None of the above

6.* Period of a business cycle in which real GDP is increasing is called:
   (a) recovery
   (b) downturn
   (c) recession
   (d) trough

7.* The four main phases of business cycle are:
   (a) boom, inflation, recession and recovery
   (b) inflation, recession, recovery and boom
   (c) recession, downturn, recovery and growth
   (d) boom, depression, recession and recovery

8.* Which of the following would NOT lead to inflation?
   (a) Increase in money supply
   (b) Increase in interest rate
   (c) Increase in tax exemptions
   (d) Exchange rate depreciation

9. * Farhan lost his job when Orient Bank closed its operations in Karachi. He received various offers but remained unemployed because he wanted a job in a bank only. Farhan's unemployment would be termed as:
   (a) frictional unemployment
   (b) structural unemployment
   (c) demand-deficient unemployment
   (d) seasonal unemployment

10. * Which of the following is NOT a motive for holding money?
   (a) Inflationary motive
   (b) Precautionary motive
   (c) Transaction motive
   (d) Speculative motive

11. * Which of the following does not normally happen in the recession phase of the business cycle?
   (a) A fall in the level of national output
   (b) A rise in the rate of inflation
   (c) A rise in the level of unemployment
   (d) All of the above

12. * The four main phases of a business cycle does NOT include:
   (a) Depression
   (b) Inflation
   (c) Boom
   (d) Recession

13. * A contraction in an economy's aggregate output combined with inflation is called:
   (a) Disinflation
   (b) Deflation
   (c) Stagflation
   (d) Recession

14. * Rapid increases in price level during recession or high unemployment is referred to as:
   (a) Stagnation
   (b) Inflation
   (c) Stagflation
   (d) Slump

15. * The sum of frictional and structural unemployment is considered as the:
   (a) Demand deficient unemployment
   (b) Natural rate of unemployment
   (c) Seasonal rate of unemployment
   (d) Cyclical rate of unemployment

16. * A period of stagflation is characterized by:
   (a) increasing prices and increasing employment
   (b) increasing prices and declining employment
   (c) declining prices and increasing employment
   (d) declining prices and declining employment

17. * The level of structural unemployment would most likely be reduced by:
   (a) increase in the level of consumer expenditure
   (b) increase in research and development grants for technology
   (c) increase in labour training
   (d) both (a) and (b)

18. * Slow economic growth and high unemployment refers to:
   (a) Stagflation
   (b) Hyper inflation
   (c) Wage spiral inflation
   (d) Deflation

19.* The Phillips curve indicates that there is a trade-off between the objectives of:
 (a) inflation and economic growth
 (b) inflation and unemployment
 (c) inflation and balance of payments
 (d) inflation and exchange rate

20.* Money does NOT function as a:
 (a) medium of exchange
 (b) protect against inflation
 (c) store of value
 (d) measure of value

21.* If the nominal interest rate is 5% and the inflation rate is 2%, then the real interest rate is:
 (a) 2%
 (b) 3%
 (c) 5%
 (d) 7%

22.* When will savings increase in a country?
 (a) When interest rate rises
 (b) When inflation increases
 (c) When more credit cards are issued by the banks
 (d) When production of consumer goods decreases

23.* Which of the following is NOT a method of holding wealth?
 (a) Bonds and equities
 (b) Human resources
 (c) Consumer durables
 (d) Commodities

24.* Other things being equal, an increase in the rate of interest leads to:
 (a) an increase in consumer spending.
 (b) an increase in saving.
 (c) an increase in business activity.
 (d) an increase in government spending.

25.* Under the Quantity Theory of Money, changes in price level are:
 (a) inversely related to change in money supply.
 (b) determined primarily by the Government.
 (c) directly proportional to changes in money supply.
 (d) independent of changes in money supply.

26.* According to the Quantity Theory of Money, if the money supply is Rs. 125 million, the average price level is Rs. 5 and national output is Rs. 300 million, the velocity of circulation of money is:
 (a) 4
 (b) 8
 (c) 12
 (d) 16

27.* Which of the following is most likely to be affected by change in interest rates?
 (a) Consumer spending
 (b) Investment spending
 (c) Government spending
 (d) Exports

28.* Which of the following is not a function of money?
 (a) Store of value
 (b) Unit of account
 (c) Standard of deferred payment
 (d) Payment of interest

29.* The term "Precautionary motive" has been discussed in:
(a) Quantity theory of money
(b) Theory of consumer behaviour
(c) Liquidity preference theory
(d) Multiplier accelerator theory

30.* In the Keynesian theory of demand for money, the transactions demand for money is determined by:
(a) The rate of interest
(b) The level of consumers' income
(c) Expected changes in consumer prices
(d) The amount of money in circulation

31.* Which of the following is NOT a motive for holding money?
(a) Inflationary motive
(b) Precautionary motive
(c) Transactions motive
(d) Speculative motive

32.* Which of the following functions money performs best when used to purchase or sell different goods and services?
(a) Store of value
(b) Medium of exchange
(c) Standard of value
(d) Statement of financial resourcefulness

33.* According to Keynes, individuals retain cash for:
(a) motives of transactions
(b) motives of precaution
(c) motives of speculation
(d) all of the above

34.* Which of the following marks the beginning of a contraction in the business cycle?
(a) Peak
(b) Trough
(c) Expansion
(d) Recession

35.* Government may increase the money supply through open market operations but such measures are likely to result in interest rates to:
(a) rise and increase the demand for money
(b) rise and reduce the demand for money
(c) fall and increase the demand for money
(d) fall and reduce the demand for money

36.* Given below is the Consumer Price Index (CPI) of a country for four years:

Year	2014	2015	2016	2017
CPI	500	550	600	650

Based on the above schedule, which of the following statements is correct?
(a) The rate of inflation has been consistently rising from 2015 to 2017
(b) The rate of inflation in 2016 is 10%
(c) The rate of inflation is the highest in 2017
(d) The rate of inflation has been consistently falling from 2015 to 2017

37.* The imposition of indirect taxes would likely result in:
(a) demand-pull inflation
(b) cost-push inflation
(c) wage spiral inflation
(d) deflation

38.* Suppose in an economy, the average price level is 1.3, real value of national output is Rs. 230 billion and the quantity of money in circulation is Rs. 103 billion. The velocity of circulation would be:
(a) 2.90
(b) 1.60
(c) 0.72
(d) 0.58

39.* Which of the following is regarded as 'Fiat money'?
(a) Gold
(b) Gold standard
(c) Credit card
(d) US dollar

40. Money serves as:
(a) a medium of exchange.
(b) a store of value.
(c) a unit of account.
(d) all the above.

41.** If inflation is expected to be 5 percent in the coming year and the nominal interest rate is 8 percent, then the real interest rate is:
(a) -3 percent
(b) 3 percent
(c) 8 percent
(d) 13 percent

42.** Unemployment Rate is a percentage relation with reference to:
(a) Total Population
(b) Labour Force
(c) Employed Persons
(d) Unemployed Persons
(e) None of these

43.** Most commonly referred indicator of Inflation is:
(a) Producer Price Index
(b) Retail Price Index
(c) GDP Deflator
(d) Consumer Price Index
(e) None of these

44.** Cost - push inflation is the result of:
(a) increase in the production cost
(b) increase in the price of industrial production
(c) escalation of international prices
(d) None of the above

45.** Structural unemployment can be eliminated by
(a) training the technologically unemployed
(b) increased federal expenditures
(c) an increase in the general credit level
(d) none of the above

46.** Increase in minimum wage:
(a) Helps in controlling unemployment
(b) Increases unemployment
(c) Reduces wage expenses
(d) None of these

47. ** Demand pull inflation is:
   (a) When aggregate demand is rising
   (b) When aggregate demand is low
   (c) when costs are rising
   (d) When costs are low

48. ** Which of the following is the narrowest measure of supply of money:
   (a) M2
   (b) M3
   (c) M1
   (d) M0

49. ** Money is:
   (a) Currency and Coins
   (b) Credit cards and drafts
   (c) Bonds
   (d) Promissory notes
   (e) None of these

50. ** Real interest rate is:
   (a) Interest rate divided by prices
   (b) Interest rate divided by inflation
   (c) Interest rate minus inflation
   (d) Interest rate plus inflation

51. ** Money can be a standard of deferred payments only if the value of money itself:
   (a) Remains stable
   (b) Increases
   (c) Decreases
   (d) None of these

52. ** According to Keynes, the relationship between money demanded and rate of interest is:
   (a) Negative
   (b) Positive
   (c) Indirect
   (d) None of these

53. ** In a period of deflation (i.e. of generally falling prices), the "real" rate of interest obtained by a lender on money lent:
   (a) Will exceed the nominal rate
   (b) Will become a negative figure
   (c) Will become a meaningless or incalculable figure
   (d) Will be less than the nominal rate.

54. ** Value of bonds fall when:
   (a) Interest rate falls
   (b) Interest rate rises
   (c) Interest rate remains constant for long time
   (d) Interest rate fluctuates
   (e) None of these

55. Which of the following would you *not* expect to see during a period of recession?
   (a) Lower business investment in durable equipment.
   (b) Lower stock prices and lower demand for labor.
   (c) Lower corporate profits and taxes.
   (d) Lower unemployment.

56. Which of the following are typical characteristics of a recession?
   (a) Consumer purchases decline sharply.
   (b) Business inventories of durable goods increase unexpectedly.
   (c) The demand for labor falls.
   (d) All of the above.

57. Hyperinflation is:
    (a) when prices rise at 100 percent or more per month.
    (b) when prices fall at 100 percent or more per month.
    (c) when prices rise at 1 percent or more per month.
    (d) when prices fall at 1 percent or more per month.

58. A depression is:
    (a) smaller than a recession.
    (b) not possible since the discovery of macroeconomics.
    (c) a recession but larger in scale and duration.
    (d) none of the above.

59. Consumption, investment, government purchases, and net exports are the four major components of what?
    (a) aggregate supply.
    (b) aggregate equilibrium.
    (c) a business cycle.
    (d) aggregate demand.

60. Required reserve ratios:
    (a) exist primarily to ensure that deposits are safe.
    (b) exist to penalize banks that are registered with central bank.
    (c) exist primarily to help the Central Bank control the money supply.
    (d) exist for none of the above reasons.

61. Which of the following situations would you expect to see during a period of economic expansion?
    (a) Falling tax receipts.
    (b) Falling corporate profits.
    (c) Falling unemployment claims.
    (d) Falling stock prices.

62. One of the results of recession that is usually good news is the fact that:
    (a) the demand for labor declines, providing more leisure time to many individuals.
    (b) business profits fall sharply, reducing their tax burden.
    (c) spending on nondurable goods declines, reducing the stress felt by supermarket cashiers.
    (d) the demand for credit falls, resulting in a decline in interest rates.

63. If inflation were caused by a supply-side price shock, then:
    (a) real GDP would necessarily increase.
    (b) it would be costless if the economy were operating at its full potential.
    (c) real GDP would be expected to fall.
    (d) it could be accelerated by a secondary reduction in aggregate demand.

64. During a period of high inflation:
    (a) borrowers are happy because they can pay off their loans with currency that is worth less.
    (b) borrowers are sad because they have to pay off their loans with currency that is worth more.
    (c) lenders are sad because they cannot find anyone who wants a loan.
    (d) lenders are sad because they are repaid with currency that is worth more.

65. The term "potential GDP" refers to which of the following?
    (a) The maximum possible GDP attainable in any point in time.
    (b) The level of GDP in which there is no frictional unemployment.
    (c) The GDP associated with the natural level of unemployment.
    (d) A level of GDP which an economy can never reach but which serves as a measuring rod.
    (e) None of the above.

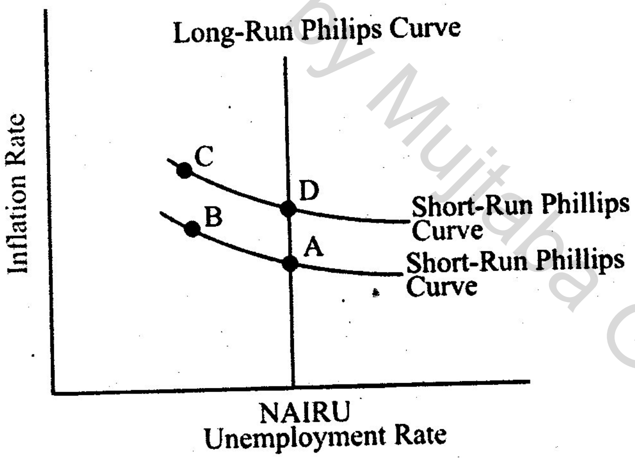
66. If inflation were caused by a sudden increase in aggregate demand, then:
    (a) real GDP would always increase.
    (b) real GDP would always fall.
    (c) real GDP might actually stay where it is because the economy was already at its full potential.
    (d) none of the above.

67. The nominal rate of return on your investment is 15 percent, the expected inflation rate at the time the investment was initiated was 5 percent, actual inflation came in 2 percent higher than expected. The real rate of return on your investment is:
    (a) 10 percent.
    (b) 8 percent.
    (c) 12 percent
    (d) 22 percent.
    (e) None of the above.

68. Cost-push inflation is characterized by which of the following phenomenon?
    (a) Reduction in output.
    (b) Increases in prices.
    (c) Increases in unemployment.
    (d) All of the above.

69. If you bought a Rs. 1,000 worth of stock in 1970 and it rose 50 percent over the decade but prices doubled in the same period, you received a real capital gain or loss of?
    (a) A loss of Rs. 500.00 or 50 percent of your original investment.
    (b) A gain of Rs. 500.00 or 50 percent of your initial investment.
    (c) A loss of Rs. 1000 or 100 percent of your initial investment
    (d) A loss of Rs. 1500 or 150 percent of your initial investment.

70. A shift from point A to point B in the figure below could indicate:



    (a) that the economy had entered a "boom cycle."
    (b) that demand had risen.
    (c) that output had risen.
    (d) that inflation had risen.
    (e) all of the above.

71. Someone who loses his or her job because of a recession would fall into the category of:
    (a) frictionally unemployed.
    (b) structurally unemployed.
    (c) cyclically unemployed.
    (d) none of the above.

72. A person who is waiting to be recalled to a job would be classified as:
    (a) employed.
    (b) unemployed.
    (c) not in the labor force.
    (d) a discouraged worker.

73. Suppose a college graduate starts work in a family business the day after graduation. As a result, we should expect the unemployment rate:
    (a) not to change at all.
    (b) to go up slightly.
    (c) to go down slightly.
    (d) to fluctuate slightly, first up and then down.

74. Which of the following statements is accurate?
    (a) Unemployment rates tend to move in parallel as the economy proceeds through the business cycle.
    (b) The duration of unemployment tends to increase during recession.
    (c) An increase in frictional unemployment is not necessarily bad.
    (d) All the above are accurate.

75. Someone who loses his or her job because of the decline of steel industry of Pakistan, would fall into the category of?:
    (a) frictionally unemployed.
    (b) structurally unemployed.
    (c) cyclically unemployed.
    (d) none of the above.

76. Someone who has just entered the labor force but had not yet found a job, would fall into the category of
    (a) frictionally unemployed.
    (b) structurally unemployed.
    (c) cyclically unemployed.
    (d) none of the above.

77. Inflation can be associated with:
    (a) only increasing nominal GDP.
    (b) increasing or decreasing real GDP, depending upon its source.
    (c) only decreasing real GDP.
    (d) only increasing nominal GDP when the economy is operating past its full potential.

78. Assuming a required 20 percent reserve ratio, a small bank which receives a cash deposit of Rs. 1,000 is in a position to:
    (a) lend out an extra Rs. 5,000.
    (b) lend out an extra Rs. 1,000.
    (c) lend out an extra Rs. 800.
    (d) lend out an extra Rs. 200.

79. Two common features associated with most hyperinflations are:
    (a) a decline in the real demand for money and a decrease in the stability of relative prices.
    (b) an increase in the real demand for money and a decrease in the stability of relative prices.
    (c) a decline in the real demand for money and an increase in the stability of relative prices.
    (d) an increase in the real demand for money and an increase in the stability of relative prices.

80. The Phillips curve shows the relationship between:
    (a) cost of producing a good and its selling price.
    (b) inflation and unemployment.
    (c) inflation and exports.
    (d) unemployment and GDP.

81. The major financial instrument or assets are:
    (a) money and savings accounts.
    (b) government securities and equities.
    (c) financial derivatives and pension funds.
    (d) all of the above.

82. What is a financial intermediary?
    (a) An institution which provides financial services and products.
    (b) Only a bank.
    (c) A company that insures your bank deposits.
    (d) State Bank of Pakistan

83. The strictest definition of money, M_1, includes:
  (a) coins, currency, and demand deposits.
  (b) coins, currency, and time deposits.
  (c) coins, currency, and all deposits in a bank.
  (d) none of the above.

84. Commercial banks are the largest category of financial intermediaries; others include:
  (a) life insurance companies.
  (b) pension funds.
  (c) savings and loan institutions.
  (d) money market funds.
  (e) all the above.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	c	32.	b	63.	c
2.	B	33.	d	64.	a
3.	B	34.	a	65.	C
4.	A	35.	c	66.	C
5.	B	36.	d	67.	B
6.	A	37.	b	68.	D
7.	D	38.	a	69.	A
8.	B	39.	d	70.	E
9.	A	40.	d	71.	C
10.	A	41.	b	72.	B
11.	B	42.	b	73.	C
12.	B	43.	d	74.	D
13.	C	44.	a	75.	C
14.	C	45.	a	76.	A
15.	B	46.	b	77.	C
16.	B	47.	a	78.	C
17.	C	48.	d	79.	A
18.	A	49.	a	80.	B
19.	B	50.	c	81.	D
20.	B	51.	a	82.	A
21.	B	52.	a	83.	A
22.	A	53.	a	84.	E
23.	B	54.	b		
24.	B	55.	d		
25.	C	56.	d		
26.	C	57.	a		
27.	b	58.	c		
28.	d	59.	d		
29.	c	60.	c		
30.	b	61.	c		
31.	a	62.	d		

CHAPTER 12: MONETARY POLICY

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* For reducing inflationary pressure, the most appropriate combination of policies for a central bank would be:
(a) increase reserve requirement, reduce discount rate and sell government securities
(b) increase reserve requirement, increase discount rate and sell government securities
(c) increase reserve requirement, reduce discount rate and buy government securities
(d) increase reserve requirement, increase discount rate and buy government securities

2.* Central banks can act as lenders of last resort because:
- (a) they have the ability to create money
- (b) they are the only financial institution that is legally allowed to make loans during financial crises
- (c) it provides consulting services to commercial banks whenever they find themselves in financial difficulty
- (d) all of the above

3.* Which of the following is NOT the function of a central bank?
- (a) Lender of the last resort
- (b) Monetary policy
- (c) Fiscal policy
- (d) Credit creation

4.* Which of the following is a financial intermediary?
- (a) Pension fund
- (b) International Monetary Fund
- (c) State Bank of Pakistan
- (d) Stock exchange

5.* Which of the following is a central bank unable to do?
- (a) Influence banks to tighten or loosen their credit policies
- (b) Create a climate of monetary ease or restraint
- (c) Directly set market interest rates
- (d) Influence the interest rate on new treasury bonds

6.* The main difference between an investment bank and a commercial bank is that investment bank:
- (a) does not accept deposits
- (b) does not underwrite shares
- (c) does not assist companies in acquiring funds
- (d) none of the above

7.** The Central Bank of a country plays a significant role in its macroeconomics performance by regulating the:
- (a) money supply
- (b) credit money
- (c) interest rate
- (d) money market
- (e) all of these

8.* Which of the following best describes Keynesian Liquidity trap?
(a) High interest rates, low savings rates
(b) Low interest rates, high savings rates
(c) High interest rates, high savings rates
(d) Low interest rates, low savings rates

9. * A central bank is likely to increase interest rates when economy is in a phase of:
(a) prosperity
(b) downturn
(c) recession
(d) trough

SUGGESTED SOLUTIONS

MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	b	5.	c	9.	a
2.	a	6.	a		
3.	c	7.	e		
4.	a	8.	b		

CHAPTER 13: CREDIT

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* If the reserve requirement is 20% and banks hold no excess reserves, an open market sale of government securities of Rs. 60 million by the central bank will:
- (a) increase the money supply by up to Rs. 300 million
- (b) decrease the money supply by up to Rs. 300 million
- (c) increase the money supply by up to Rs. 12 million
- (d) decrease the money supply by up to Rs. 12 million

2. If a deposit of Rs. 100 in the banking system can lead to a total expansion in bank deposits of Rs. 400, then the required reserve ratio must be:
- (a) 40 percent.
- (b) 25 percent.
- (c) 400 percent.
- (d) 4 percent.

3. The money-supply multiplier assumes that:
- (a) all new money is deposited in checking accounts.
- (b) individuals do not retain cash balances.
- (c) banks do not hold excess reserves.
- (d) all of the above.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	b	2.	b	3.	d

CHAPTER 14: BALANCE OF PAYMENTS AND TRADE

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1. * If the American dollar is overvalued relative to the Pakistan rupee:
   (a) Pakistani goods are cheaper than US goods
   (b) the Pakistan rupee is undervalued relative to the dollar
   (c) the rupee price of the dollar must rise
   (d) the cost of Pakistani goods in the United states must be increasing

2. * Which of the following is regarded as an argument in favour of trade protection?
   (a) to protect domestic labour against cheap foreign labour
   (b) to reduce domestic unemployment
   (c) to protect small industries
   (d) all of the above

3. * Which of the following is NOT considered to be a protectionist measure?
   (a) Tariff
   (b) Exchange control regulations
   (c) Export subsidies
   (d) Free imports

4. * The rate of exchange of the currency of a country will tend to increase, if:
   (a) the demand for the country's goods and services increases in the foreign markets.
   (b) the value of the dominant reserve/transaction currency appreciates significantly.
   (c) the supply of currency of that country in foreign exchange markets increases.
   (d) citizens of that country increase import of foreign goods and services.

5. * A devaluation of the currency will normally result in:
   (a) a reduction in the current account deficit
   (b) an increased level of economic activity
   (c) a reduction in the domestic cost of living
   (d) both (a) and (b)

6. * Which of the following is the advantage of floating exchange rates?
   (a) Avoids damaging speculation against the currency
   (b) Avoids the need for government intervention in the foreign exchange markets
   (c) There is need to hold reserves
   (d) Both (a) and (b)

7. * Index price of exports ÷ Index price of imports is equal to:
   (a) Balance of trade
   (b) Balance of payment
   (c) Terms of trade
   (d) Inflation

8. * Which of the following measures would immediately increase the cost of imports?
   (a) Tariff
   (b) Quota
   (c) Embargo
   (d) Subsidies

9. * Currency is usually devalued to:
   (a) Increase imports
   (b) Increase exports
   (c) Decrease inflation
   (d) Increase prices

10.* Which of the following measures would immediately increase the cost of imports?
   (a) Dumping duty
   (b) Embargo
   (c) Subsidies
   (d) Tariff

11.* If the UK Pound is overvalued relative to the Pak rupee:
   (a) Pakistani exporters will be in an advantageous position
   (b) Pakistani importers will be in an advantageous position
   (c) UK exporters will be in an advantageous position
   (d) Both (b) and (c)

12.* Which of the following is a monetary measure for correcting the current account deficit?
   (a) Quotas
   (b) Export promotion
   (c) Import substitution
   (d) Exchange rate depreciation

13.* Balance of payments surplus is balanced by:
   (a) buying gold or other foreign reserves
   (b) paying off debts
   (c) selling gold or other foreign reserves
   (d) both (a) and (b)

14.* Which of the following cannot be used as a tool to correct balance of payments disequilibrium?
   (a) Floating exchange rate
   (b) Fixed exchange rate
   (c) Domestic interest rate
   (d) Buying / selling of domestic currency by central bank

15.* In an economy where demand for imports is price inelastic and demand for exports is price elastic, an appreciation in the value of domestic currency would result in:
   (a) increase in imports spending and decrease in exports revenue
   (b) increase in exports revenue and decrease in imports spending
   (c) increase in imports spending as well as exports revenue
   (d) decrease in imports spending as well as exports revenue

16.* The Current Account of the Balance of Payments consists of:
   (a) Trade in goods and services
   (b) Investment income
   (c) Transfers
   (d) All of the above

17.* The protective measure of a government where only a fixed amount may be imported into a country refers to:
   (a) Import tariff
   (b) Export tariff
   (c) Quota
   (d) Import substitution

18.* Demand for imports may be price inelastic due to:
   (a) high dependence on imports
   (b) firmly entrenched preferences for imported goods
   (c) lack of flexibility of domestic firms to replace imports
   (d) all of the above

19.* A Pakistani resident makes an investment in a company resident in United States. This transaction will be recorded in Pakistan as:
(a) credit in current account
(b) debit in current account
(c) credit in capital account
(d) debit in capital account

20.* The restrictive monetary policy in an open economy with flexible exchange rate is most likely to result in:
(a) higher interest rates and an exchange rate appreciation
(b) higher interest rates and an exchange rate depreciation
(c) lower interest rates and an exchange rate appreciation
(d) lower interest rates and an exchange rate depreciation

21.* Which of the following is a non-monetary measure for correcting current account deficit?
(a) Exchange rate depreciation
(b) Tariffs
(c) Interest rate appreciation
(d) Exchange control

22.* Which of the following policy combination is likely to solve a deficit on the current account of the balance of payment in an economy with a floating exchange rate?
(a) Decrease interest rates and increase income tax rates
(b) Increase interest rates and decrease income tax rates
(c) Decrease interest rates and decrease income tax rates
(d) Increase interest rates and increase income tax rates

23.* The most effective macroeconomic policy to increase output under fixed exchange rates and perfect capital mobility would be:
(a) an expansionary monetary policy
(b) a revaluation of the domestic currency
(c) an expansionary fiscal policy
(d) an increase in taxes

24.** The account in balance of payment that consists of all transactions in financial assets is known as:
(a) Capital account
(b) Current account
(c) Official Reserve account
(d) None of these

25.** The difference between exports and imports of visible items of a country is called:
(a) Budget surplus
(b) Balanced budget
(c) Balance of trade
(d) Both (a) and (c)

26.** The terms of trade are measured by:
(a) the quantity of imported goods that can be obtained for each unit of an exported good.
(b) the ratio of the price of imports to the price of exports.
(c) the value of imported goods that can be obtained for each dollar of exported goods.
(d) all of the above.

27.** A substantial fall in the price of Pakistani currency relative to foreign currencies could be expected to affect physical quantities of exports from Pakistan and imports into Pakistan as follows:
(a) Increase both exports and imports
(b) Increase exports, decrease imports
(c) Decrease both exports and imports
(d) Decrease exports, increase imports
(e) Have no perceptible affect on either imports or exports.

28. ** A difference between a tariff on an imported good and a quota on such a good is:
    (a) That a quota can never be made to yield revenue for the government, whereas a tariff can.
    (b) That a tariff can never be made to yield revenue for the government, whereas a quota can.
    (c) That a quota can be used to shut off all the inflow of the imported good whereas a tariff cannot.
    (d) That a tariff can be used to shut off all the inflow of the imported good whereas a quota cannot.

29. ** Devaluation of rupee would result into:
    (a) Expensive exports
    (b) Expensive Imports
    (c) Expensive Labour
    (d) Overvalued Rupee
    (e) None of these

30. ** Balance of Trade Deficit refers to:
    (a) Excess of payments for import of goods and services over receipts from exports of goods and services
    (b) Excess of receipts from commodity exports minus payments for imports of goods
    (c) Payments for commodity imports minus receipts from commodity exports
    (d) None of the above

31. ** Balance of payments deficit implies:
    (a) Deficit to the current account
    (b) Deficit in the Capital account
    (c) All of these
    (d) None of these.

32. The trade balance consists of:
    (a) the difference between the financial account and the current account.
    (b) the difference between foreign investment and foreign saving.
    (c) imports or exports of merchandise.
    (d) a comparison of international exchange rates.

33. An open economy is:
    (a) an economy that engages in international trade.
    (b) an economy that engages in internal trade only.
    (c) an economy that doesn't charge tariffs.
    (d) an economy that only exports.

34. A "deficit on current account" implies that:
    (a) the Pakistani Government is spending more than its tax revenue.
    (b) the balance of payments are not summing to zero, as they should.
    (c) private capital flows are a net debit entry.
    (d) the balance on financial and capital accounts, is in surplus.

35. The balance of payments has two fundamental parts:
    (a) current account and financial account.
    (b) current account and income account.
    (c) long-term account and financial account.
    (d) long-term account and income account.

36. Which of the following might serve to cure balance-of-trade deficit in Pakistan?
    (a) More unemployment.
    (b) A rise in the price level.
    (c) An inflow of gold.
    (d) A depreciation of the Pak Rupees.

37.* A US resident sets up a factory in Pakistan. This transaction will be recorded in Pakistan as:
(a) credit in current account
(b) debit in current account
(c) credit in capital account
(d) debit in capital account

38.* A contractionary monetary policy in an open economy with a flexible exchange rate would possibly steer the economy towards a:
(a) higher domestic interest rate and exchange rate appreciation
(b) higher domestic interest rate and exchange rate depreciation
(c) lower domestic interest rate and exchange rate appreciation
(d) lower domestic interest rate and exchange rate depreciation

39. A substantial fall in the price of the dollar in foreign currencies could be expected to affect physical quantities of exports from the United States and imports into the United States in which of the following ways?
(a) It would increase both exports and imports.
(b) It would increase exports and decrease imports.
(c) It would decrease both exports and imports.
(d) It would decrease exports and increase imports.

40. If a country depreciates the foreign exchange value of its currency, the results will typically be that:
(a) its imports will seem cheaper (from the viewpoint of its own citizens), and its exports will seem more expensive (from the viewpoint of foreigners).
(b) its imports will seem more expensive (from the viewpoint of its own citizens), and its exports will seem cheaper (from the viewpoint of foreigners).
(c) both its imports and its exports will seem cheaper (from the viewpoint of both its own citizens and foreigners).
(d) both its imports and its exports will seem more expensive (from the viewpoint of both its own citizens and foreigners).

41.* Which of the following is not an advantage of floating exchange rate?
(a) It minimizes government intervention in foreign exchange markets
(b) It automatically corrects disequilibrium in balance of payments
(c) It stimulates demand for exports
(d) It frees policy instruments of government

42. If GDP falls in the United States and exchange rates are floating, then:
(a) imports will tend to decrease and the price of the U.S. dollar will tend to increase.
(b) imports will tend to decrease and the price of the U.S. dollar will tend to decrease.
(c) imports will tend to increase and the price of the U.S. dollar will tend to increase.
(d) imports will tend to increase and the price of the U.S. dollar will tend to decrease.
(e) none of the preceding statements will be true.

43. A boycott of Indian goods by Pakistani consumers might result in:
(a) a depreciation of the Pak Rupee relative to the Indian currency.
(b) a depreciation of the Indian currency relative to the Pak Rupee.
(c) an inflation of the domestic economy of India.
(d) none of the above.

44. Some countries like undervalued exchange rates because:
(a) it makes imports cheaper.
(b) it alleviates the balance-of-payments problem.
(c) it promotes exports.
(d) it decreases exports.

45. Which of the following is an economic reason why countries may engage in international trade?
(a) Differences in natural resources.
(b) Differences in production costs.
(c) All of the above.
(d) None of the above.

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	b	17.	c	33.	a
2.	d	18.	d	34.	d
3.	d	19.	d	35.	a
4.	a	20.	a	36.	a
5.	d	21.	b	37.	c
6.	b	22.	d	38.	a
7.	c	23.	c	39.	b
8.	a	24.	a	40.	b
9.	b	25.	c	41.	c
10.	d	26.	b	42.	b
11.	a	27.	b	43.	b
12.	d	28.	a	44.	c
13.	d	29.	b	45.	c
14.	b	30.	c		
15.	d	31.	a		
16.	d	32.	c		

CHAPTER 15: FINANCIAL MARKETS

Select the most appropriate answer from the options available for each of the following Multiple Choice Questions. Each MCQ carries ONE mark. Questions marked with single asterisk (*) are selected from past examination papers of ICAP (CA), and questions marked with double asterisks (**) are selected from past examination papers of FPSC (CSS).

1.* Which of the following instruments are NOT traded in the capital market?
  (a) Corporate bonds
  (b) Treasury bills
  (c) Mortgages
  (d) Shares

2.* The financial market which is used to raise short term finance is called:
  (a) capital market
  (b) money market
  (c) derivative market
  (d) bond market

3.* The main advantage of a mutual fund is that:
  (a) it provides short term finance for investment in capital and money market
  (b) it provides long term finance for investment in capital and money market
  (c) it gives opportunity to investors to invest in a diversified portfolio
  (d) none of the above

4.* An instrument whose price is dependent on one or more underlying asset(s) is called:
  (a) share
  (b) certificate of deposit
  (c) derivative
  (d) treasury bill

5.* Which of the following financial markets usually acts as an intermediary between those looking to raise finance, and those looking to invest?
  (a) Capital market
  (b) Derivation market
  (c) Money market
  (d) Both (a) and (b)

6.* Preference shares enjoy certain privileges over ordinary shares. Which of the following is NOT a privilege of preference shares?
  (a) First right to dividend
  (b) Greater voting rights
  (c) First right to assets in the event of liquidation of a company
  (d) Both (b) and (c)

7.* Which of the following instruments would be expected to give the lowest yield?
  (a) Sovereign bonds
  (b) Corporate bonds
  (c) Certificates of deposit
  (d) Shares

8.* Which of the following is the main distinguishing factor between capital and money markets?
  (a) Transaction costs
  (b) The amounts involved
  (c) Time to maturity
  (d) Risk Involved

9.* Which of the following is NOT considered to be a debt instrument?
(a) IOU
(b) Demand Draft
(c) Bond
(d) Stock

10.* The instrument that may be issued by government in capital market to raise money for a long-term investment is:
(a) certificate of deposits
(b) commercial paper
(c) preference shares
(d) bonds

11.* Which of the following is NOT related to the capital market?
(a) Commercial banks
(b) Mercantile exchanges
(c) Stock exchanges
(d) Insurance companies

12.* Which of the following statements is correct regarding instruments of financial market?
(a) Derivatives are equity instruments traded on money market
(b) Certificate of deposits are subject to higher default risk than treasury bill
(c) Debentures are short term money market instruments
(d) Both (a) and (b)

13.* Which of the following is NOT regarded as a money market instrument?
(a) Commercial papers
(b) Certificate of deposits
(c) Treasury bills
(d) Bonds

SUGGESTED SOLUTIONS					
MCQ #	Correct Option	MCQ #	Correct Option	MCQ #	Correct Option
1.	b	6.	b	11.	b
2.	b	7.	a	12.	b
3.	c	8.	c	13.	d
4.	c	9.	d		
5.	a	10.	d		

PART C

REVISION SET

How to Use This Revision Set

Revision of a theoretical subject (particularly on the day before exam) is as much important as its preparation during the whole session. Unfortunately, most of the students don't know who to cover maximum topics in minimum time during revision; and they usually waste time by focusing and revising on areas which they already have prepared well. To make efficient and effective revision of CAF 02 (Introduction to Economics and Finance), I have prepared this revision set.

In my opinion, revision of topics should be made periodically during the session. Approach to revision should be to go through entire syllabus, to identify weak areas where your preparation is not well and then to focus your efforts on those weak areas. To ensure coverage of entire syllabus, you will find lot of questions in this set covering entire syllabus. If you are looking for some kind of 'guess' or 'important' questions, this revision set is NOT for you.

Suggested Approach to Use this Revision Set:

- Below is a list of chapter-wise questions prepared for each chapter. (Students using ICAP's Study Text will also find it useful as reference of paragraph is given where answers can be found in ICAP's Study Text e.g. 4.5.2 means chapter 4, section 5, subsection 2 in ICAP's Study Text).
- Once you complete a chapter from book, you should go to revision questions and should try to answer them without looking back in the book.
- Read all revision questions one by one. If you can answer the question with 80% or more accuracy, tick the question (however, you may look at answer to memorize it to 100% level).
- If you cannot answer the question upto 80% accuracy, write number of that question on a separate page. When you finish revision, this separate page (which we will call Pending Concepts) will be the concepts YOU NEED TO FOCUS!
- Repeat this revision again after some days. With every revision, you will notice that time of revision and number of pending concepts are being reduced.

GRID A: CONCEPTS OF ECONOMICS
CHAPTER: 1
WEIGHTAGE (5 – 10)

CHAPTER 1: FUNDAMENTALS OF ECONOMICS

Q.1 (a) Critically analyze the economics as "science of wealth" as defined by Adam Smith.
(b) Critically analyze the economics as "science of material welfare" as defined by Alfred Marshal.
(c) Critically analyze the economics as "science of scarcity and choice" as defined by Lionel Robbins. (1.1.1, 1.1.2, 1.1.3)

Q.2 (a) Scarcity of goods gives rise to some basic questions that are faced by every economy. Describe these basic economic problems (or economic questions). (1.2.1, 1.3.1, 1.4.1)

(b) Distinguish between Microeconomics and Macroeconomics and elaborate their respective fields of study. Also discuss their limitations. (1.3.3, 2.1.8)

Q.3 (a) Define four types of agents (or participants) in an economy.
(b) How concepts of scarcity and opportunity cost apply on these agents of economy. (1.3.4, 1.3.7, 1.3.9)

Q.4 (a) Define four factors of production. Give examples.
(b) Identify and explain rewards received by each factor of production. (1.3.8

Q.5 (a) Define 'Production Possibility Frontier (or Curve').
(b) Explain two characteristics of PPF (or PPC).
(c) With the aid of the production possibilities curve, explain the concepts of
(i) Growth
(ii) Marginal Rate of Product Transformation (or Opportunity cost)
(iii) Scarcity and
(iv) Choice (1.4

Q.6 (a) What is meant by Specialization and Division of labor. Explain with the help of an example. (1.
(b) What is meant by Capital formation. Discuss three stages of capital formation.

Free/Market Economy:

Q.7 (a) Explain how the resource allocation choices are made in a market economy. (OR how it resolves the basic econ problem) (
(b) State some benefits and drawbacks of a free economy.

Command/Planned Economy:

Q.8 (a) Explain how the resource allocation choices are made in a planned economy. (OR how it resolves the basic eco problem)
(b) State some benefits and drawbacks of a planned economy.

Mixed Economy:

Q.9 (a) Explain how the resource allocation choices are made in a mixed economy. (OR how it resolves the basic economic problem)
(b) State some benefits and drawbacks of a mixed economy.
(c) Explain the role of State in a mixed economy.

(1.4.6)

Islamic Economic System:

Q.10 (a) Briefly discuss the important features of 'Islamic economic system'.
(b) State atleast three principles of Sharia Law.
(c) State five categories of Islamic financing.
(d) Differentiate Islamic economic system from Capitalist economic system.

(1.5.2, 1.5.3, 1.5.4)

GRID B: MICROECONOMICS
CHAPTERS: 2, 3, 4, 5
WEIGHTAGE (25 – 35)

CHAPTER 2: MICROECONOMICS

.11 (a) What is the difference between needs and wants.
(b) Define goods and services.

(2.1.2)

.12 Goods can be classified on various bases. Define (or differentiate between) following types of goods:
(i) Complement goods and Substitute goods.
(ii) Complement in production (or Goods in joint supply) and Substitute in production (Goods in competitive supply)
(iii) Normal goods, Inferior goods, Superior goods
(iv) Giffen goods
(v) Perishable goods and Durable goods
(vi) Merit goods and Demerit goods
(vii) Public goods, Private goods and Club goods

(2.1.3, 2.2.5, 2.2.6, 2.2.7, 2.2.12, 2.3.7, 2.3.8, 2.4.5)

13 (a) What is the difference between 'individual demand' and 'market demand'.
(b) What is the difference between 'supply' and 'stock'.
(c) What is the difference between 'income' and 'wealth'.

(2.1.4, 2.1.5, 2.1.6)

Law of Demand:

4 (a) Define demand. What are the determinants of demand. (OR factors affecting quantity of demand).
(b) Briefly explain law of demand with the help of schedule and diagram. Also list its assumptions.
(c) Why slope of demand curve is downward.
(d) State limitations and exceptions of law of demand.
(e) Discuss practical importance (or significance) of law of demand.

(2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.2.7, 2.2.8, 2.2.9, 2.2.10, 2.2.11, 2.2.12)

5 (a) Define supply. What are the determinants of supply. (OR factors affecting quantity of supply).
(b) Briefly explain law of supply with the help of schedule and diagram. Also list its assumptions.
(c) Discuss practical importance (or significance) of law of supply.

(2.3.2, 2.3.3, 2.3.4, 2.3.5, 2.3.6, 2.3.7, 2.3.8, 2.3.9, 2.3.11)

Q.16 (a) What is the difference between 'equilibrium price' and 'regulated price'.
(b) How equilibrium price is determined in a free market.
(c) What happens to the equilibrium price if market is in disequilibrium e.g. if there is shortage, or there is surplus.
(2.4.1, 2.4.2, 2.4.3)

Q.17 (a) Explain with the help of a diagram the difference between shift of demand (or shift of supply) and movement along demand curve (or moment along supply curve).

(b)Show how the equilibrium price and quantity of a commodity changes (i) when its demand increases (ii) when its demand falls (iii) when its supply increases (iv) when its supply falls.

(c)Using demand and supply analysis, examine the effect on the equilibrium price and quantity traded of beef in Europe of each of the following events. Please, consider each event separately.
(i) A decline in the price of cattle feed.
(ii) A rise in the demand for chicken.
(iii) A fall in the subsidy paid to beef cattle producers.
(2.4.4)

Q.18 (a) Define 'reservation price'. What factors affect 'reservation price'.
(b) Define consumer value. What happens to consumer value if price of the good falls.
(c) Elaborate the relationship between supply and time.
(2.3.1, 2.2.3, 2.3.10)

Q.19 (a) It is a common phenomenon that demand for houses continues to rise even if prices of houses rise. Why does this happen so? Are houses giffen goods?
(b) How is price mechanism of perishable goods different from durable goods?
(2.2.12, 2.4.5)

CHAPTER 3: DEMAND AND SUPPLY: ELASTICITIES

Elasticity of Demand:

Q.20 (a) What is meant by price elasticity of demand (**P_{ED}**) ?

(b) Briefly explain how elasticity can be measured using
(i) Percentage Method (Arc or Point). Also state how to interpret result.
(ii) Total Expenditure (or Total Revenue or Total Outlay) Method. Also state the impact of a decrease in price on total expenditure in each of the different types of elasticities.
(iii) Geometric Method

(c) Price of a product declined from Rs. 8 per unit to Rs. 7 per unit, and demand for the product increased from 15 units to 25 units.
Required:
(i) Calculate price elasticity of demand using Percentage (Arc) method. Interpret your result.
(ii) Identify price elasticity of demand using Total Expenditure method
(3.1.3)

Q.21 Briefly describe, with the help of diagrams, following types of elasticity of demand:
(i) Perfectly Elastic
(ii) Relatively (or Highly) Elastic
(iii) Unit Elastic
(iv) Relatively (or Highly) Inelastic
(v) Perfectly Inelastic
(3.1.3)

Q.22 Explain briefly the factors which determine the Price Elasticity of Demand.
(3.1.2)

Q.23 Briefly explain the following (including formula and interpretation of result):
(i) Income elasticity of demand (Y_{ED})
(ii) Cross price elasticity of demand (X_{ED})
(3.1.5, 3.1.6)

Q.24 (a) Why is it useful for firms and government to know Price Elasticity of Demand of products.
(3.1.4)

(b) Why is it useful for firms to know Income Elasticity of Demand of products.
(3.1.5)

(c) Why is it useful for firms to know Cross Elasticity of Demand of products.

Elasticity of Supply:

Q.25 (a) State the meaning of 'price elasticity of supply'.
(b) Briefly discuss different types of elasticity of supply.
(c) Briefly explain the factors which determine the price elasticity of supply.
(3.2.2, 3.2.3)

Dynamic Changes in Supply and Demand:

Q.26 In some markets, prices are stable (e.g. in Milk market where supply is elastic). However, in some other markets prices are volatile (e.g. in corn market where supply is inelastic).
(a) Explain, with the help of diagrams, how prices fluctuate significantly in markets where demand and supply are inelastic (as compared to markets where demand and supply are elastic).
(b) What are some causes of instability of price in agriculture markets.
(c) Explain with the help of diagram how government can increase price stability through 'buffer stock scheme'. What are some of disadvantages of buffer stock scheme.
(3.3.2)

Q.27 Cobweb theory explains how the market reaches equilibrium, from a point that started from disequilibrium.
(b) Explain using Cobweb diagram, how prices eventually move towards equilibrium.
(c) What is the main criticism on Cobweb theory.
(3.3.3)

CHAPTER 4: UTILITY ANALYSIS

Q.28 (a) What is meant by Consumer Equilibrium?
(b) Distinguish between cardinal and ordinal approaches of consumer equilibrium. What are the drawbacks of each approach.
(4.1.3, 4.1.4, 4.1.5)

Utility Theory:

Q.29 (a) Define Utility, Marginal utility and Total Utility.
(b) Describe the law of diminishing marginal utility along with a numerical example and graphical presentation.
(c) With respect to Law of Diminishing Marginal Utility:
(i) State its assumptions.
(ii) State its exceptions.
(iii) State its practical importance.
(4.1.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5)

Q.30 (a) Describe the law of equi-marginal utility (OR when is a consumer in equilibrium under utility theory) along with a numerical example and graphical presentation.
(b) With respect to Law of Equi-Marginal Utility:
(i) State its assumptions.
(ii) State its limitations.
(iii) State its practical importance.
(4.3.7)

Indifference Curve Theory:

Q.31 (a) What is an indifference curve? List and explain the properties of an indifference curve.
(b) Narrate the basic assumptions applicable to the Indifference Curve Approach.
(c) Define 'Marginal Rate of Substitution' with the help of a table (or indifference curve analysis). Why does the marginal rate of substitution diminish? **(4.3.2, 4.3.3, 4.3.4, 4.3.5)**

Q.32 (a) What is meant by Budget Line?
(b) How does change in income of consumer affects budget line?
(c) How does change in price of product affects budget line? **(4.3.6)**

Q.33 Using indifference curve approach, state when is a consumer in equilibrium? Explain with the help of a diagram. **(4.3.7)**

Q.34 (a) What is income effect?
(b) In the context of Consumer's Equilibrium, explain the effect of increase in income when:
(i) the goods being used are 'normal'
(ii) one of the goods is 'inferior'

(c) In the context of Consumer's Equilibrium, explain the effect of decrease in income when:
(i) the goods being used are 'normal'
(ii) one of the goods is 'inferior' **(4.4.4)**

Q.35 (a) What is Price effect?
(b) In the context of Consumer's Equilibrium, explain the effect of decrease in price when:
(i) the goods being used are 'complimentary'
(ii) the goods being used are 'substitute'
(iii) the goods being used are 'independent'
(iv) one of the goods is 'giffen'

(c) In the context of Consumer's Equilibrium, explain the effect of increase in price when:
(i) the goods being used are 'normal'
(ii) one of the goods is 'giffen' **(4.4.2, 4.4.5)**

Q.36 With the help of a diagram, prove that : Price effect = Income effect + Substitution effect when:
(i) the goods being used are 'normal'
(ii) one of the goods is 'inferior'
(ii) one of the goods is 'giffen' **(4.4.3, 4.4.6**

CHAPTER 5: COSTS, REVENUES AND FIRMS

Q.37 (a) What are different types of firms, in economics.
(b) What is meant by the term equilibrium of the firm.

Cost Curves and Revenue Curves:

Q.38 (a) What is the difference between Fixed cost and Variable cost. Give examples and diagrams.
(b) What is the difference between Explicit cost and Implicit cost. Give examples.
(c) What is the difference between Short-run and Long-run in economics. Give examples. **(5.1.2, 5.1.3, 5.1.**

Q.39 (a) What is marginal revenue, and average revenue. State formulas to calculate them. **(5.3**

(b)
(i) What is marginal cost, and average cost. State formulas to calculate them.
(ii) Explain why the short-run average/marginal cost curve is "U" shaped. (OR Explain why Total Variable Cost curve is curvi-linear, instead of linear)

(5.1.5)

Relationships between revenue curves:

Q.40 (a) Explain the relationship between marginal revenue and average revenue under perfect competition.

(5.3.2)

(b) Explain the relationship between marginal revenue and average revenue under imperfect competition.

(5.3.3)

Relationships between cost curves:

Q.41 (a) Explain, with the help of a diagram, the relationship between 'Marginal' and 'Average' cost.

(5.1.6)

(b) Explain, with the help of a diagram, the relationship between long-run average cost curve and short-run average cost curve. (OR how LRAC is derived from SRAC curves)

(5.2.4)

(c) Explain, with the help of a diagram, the relationship between long-run total cost curve and long-run marginal cost curve. (OR how LRMC is derived from LRTC curves)

(5.2.5)

Law of Production in Long-run:

Q.42 Explain "economies of scale" and "diseconomies of scale" with the help of long run average cost curve.

OR

Describe why a firm's long-run average cost curve is U-shaped by clearly showing economies of scale, and diseconomies of scale.

(5.2.2, 5.2.3)

Law of Production in Short-run:

Q.43 Explain the "Law of Increasing Return" or "Law of Decreasing Return" with the help of schedule and diagram of marginal product curve. Also state its assumptions.

OR

Explain "Laws of Variable Proportions" or "Laws of Costs" or "Laws of Return" with the help of schedule and diagram of variable cost curve. Also state its assumptions.

(5.1.7, 5.1.8, 5.1.9, 5.1.10)

Tip:** Laws of Variable Proportions Or Laws of Returns Or Laws of Costs = **Law of Increasing Return (or Decreasing Cost) + Law of Decreasing Return (or Increasing Cost)

Perfect Competition:

Q.44 (a) What do you understand by Perfect Competition? Briefly explain the important conditions which are necessary for the existence of Perfect Competition in a market.
(b) Explain with the help of an appropriate diagram, the Equilibrium (OR how profit is maximized OR how price and output are determined) of a Firm under perfect competition, in the long run.
(c) Describe a firm's equilibrium under perfect competition in the short run with the help of diagrams.
(d) Explain with the help of a diagram, the shut down point of a firm under perfect competition.

(5.4.2)

Monopolistic Competition:

Q.45 (a) What is meant by Monopolistic-Competition? Enumerate its main characteristics.
(b) Explain with the help of an appropriate diagram, the Equilibrium (OR how profit is maximized OR how price and output are determined) of a Firm under monopolistic competition, in the long run.
(c) Describe a firm's equilibrium under monopolistic competition in the short run with the help of diagrams.
(d) State two advantages and two disadvantages of monopolistic competition.

(5.4.6)

Oligopoly:

Q.46 (a) Define oligopoly. Briefly discuss any six features of oligopoly.
(b) Define price cartel. Discuss the factors that are responsible for the success / failure of price cartel.
(c) State four advantages and four disadvantages of oligopoly.
(d) Briefly explain 'kinked demand curve' with the help of a diagram. List its assumptions.
(5.4.5)

Monopoly:

Q.47 (a) Define monopoly. State the main features of monopoly
(b) Explain with the help of an appropriate diagram, the Equilibrium (OR how profit is maximized OR how price and output are determined) of a firm under Monopoly, in the long run.
(c) Describe a firm's equilibrium under Monopoly in the short run with the help of diagrams.
(5.4.4)

Q.48 (a) What is 'Price discrimination'?
(b) Briefly describe the conditions for exercising Price Discrimination.
(c) Explain, with the help of a diagram, how a monopolist engaged in price discrimination in different markets would be able to earn maximum revenues.
(5.4.4)

Q.49 (a) List some advantages and disadvantages of having monopoly setup.
(b)There are three types of barriers which monopolists use to deter entry of competitors into market. List these barriers with examples.
(c) There are three types of inefficiencies which are usually present in a firm operating under monopoly. Define these inefficiencies giving atleast one example of each.
(5.4.4)

GRID C: MACROECONOMICS
CHAPTERS: 6, 7, 8, 9, 10, 11 (Inflation & Unemployment)
WEIGHTAGE (25 – 35)

CHAPTER 6: MACROECONOMICS: AN INTRODUCTION

Q.50 (a) Draw a diagram of Circular Flow of Income.
(b) List three types of 'Withdrawals' and 'Injections' from/into the Circular Flow of Income.
(6.3.2, 1.3.6)

Q.51 (a) With reference to Circular Flow of Income, briefly explain what happens to an economy if:
(i) Imports and more than Exports.
(ii) Government Spending is more than Taxation.
(iii) Withdrawals are more than Injections.
(iv) Injections are more than Withdrawals.

(b) What is the relationship between saving and investment in the long-run.
(6.3.2)

Q.52 (a) Briefly describe three different approaches to measure National Income (or GDP).
(b) What are difficulties associated with each method of calculation of National Income (or GDP).
(6.3.3, 6.3.4, 6.3.5)

Q.53 (a) Define "Aggregate Demand (AD)". List down its components. What factors cause shift in AD curve.
(b) Draw and explain AD Curve.
(6.4.3)

Q.54 (a) Define "Aggregate Supply (AS)". What factors cause shift in AS curve.
(b) Draw and explain "Short-run Aggregate Supply (SRAS)" Curve and "Long-run Aggregate Supply (LRAS)" Curve, under classical approach (also called neo-classical approach).
(c) Draw and explain "Aggregate Supply (AS)" Curve, under Keynesian Approach. Also show full employment level in the diagram.
(6.4.2)

Q.55 (a) Using new-classical approach, show macro-economic equilibrium.
(b) How will economy move towards equilibrium if:
(i) general price level is above the equilibrium point.
(ii) general price level is below the equilibrium point.
(c) What will be effect on economy if:
(i) Aggregate Demand (AD) Curve shifts rightward (or AD is increased).
(ii) Short-run Aggregate Supply (SRAS) Curve shifts rightward (or SRAS is increased).
(6.4.4)

Q.56 Output gap is the difference between Potential GDP/Output and Actual GDP/Output in an economy.
Using new-classical approach,
(a) Illustrate with the help of a diagram, the concept of deflationary gap in the economy.
(b) Illustrate with the help of a diagram, the concept of inflationary gap in the economy.
(6.4.5, 6.4.6, 6.4.7)

Q.57 (a) Using Keynesian approach, show macro-economic equilibrium.
(b) What will be effect on economy if:
(i) Aggregate Demand (AD) Curve shifts rightward (or AD is increased).
(ii) Aggregate Supply (AS) Curve shifts rightward (or AS is increased).
(8.2.1)

Q.58 Define GDP and GNP. What is the link between GDP and GNP. Illustrate with the help of formula.
(6.2.1, 6.2.2, 6.2.4)

Q.59 Differentiate following concepts with the help of formula:
(i) Gross domestic product (GDP) and Net Domestic Product (NDP).
(ii) Gross national product (GNP) and Net national product (NNP).
(iii) Personal income (PI) and Disposal personal income (PDI).
(6.2.3, 6.2.4, 6.2.5)

Q.60 (a) What is the difference between Nominal GDP and Real GDP?
(b) What is the difference between National Income at market price and National Income at factor cost.
(6.2.1, 6.3.1)

Q.61 (a) Enumerate the problems and difficulties encountered in computation of National Income.
(b) Enumerate the problems and difficulties encountered in making single country comparison and international comparison of national income.
(6.1.4, 6.1.5)

CHAPTER 7: CONSUMPTION, SAVINGS AND INVESTMENT

Consumption:

Q.62 (a) Define "consumption". Briefly explain determinants of consumption.
(7.1.1, 7.1.3)
(b) Differentiate between "Autonomous" and "Induced" Consumption.

Q.63 (a) Discuss the Keynes' Psychological Law of Consumption and the related propositions.
(7.1.2)

(b) Keynes explained theory of consumption with the help of an equation (called consumption function) and a diagram (called consumption curve).

(7.1.4)

Q.64 With reference to Keynes' consumption function:
(i) Define "marginal propensity to consume (MPC)". (also called gradient of consumption curve)
(ii) Do MPC of the rich and the poor is same? Why or why not?
(iii) Explain relationship of "marginal propensity to consume (MPC)" with "marginal propensity to Save (MPS)".

(7.1.4, 7.1.5)

Q.65 (a) When MPC increases, does consumption curve become steeper of flatter? Show with the help of diagram.
(b) What is meant by shift in consumption curve. Show the effect of change in consumption if tax rate or interest rate is decreased and consumption goes up.

(7.1.4, 7.1.5)

Saving:

Q.66 Define "saving". Briefly explain determinants of saving.

(7.1.7)

Investment:

Q.67 (a) Define investment.
(b) Differentiate between "Autonomous" and "Induced" investments, with the help of diagrams. Give any two examples of each.

(7.2.1, 7.2.2, 7.2.3)

Q.68 In theory of investment, Keynes introduced concept of "marginal efficiency of capital (MEC)". He stated that if market rate of interest increases, MEC decreases and level of investment decreases (and vice-versa).
(a) Define "marginal efficiency of capital (MEC)".

(b) The curve showing inverse relationship between rate of interest and investment is called MEC Curve.
(i) Briefly explain, with the help of a diagram, why MEC Curve is downward sloping.
(ii) State factors which can shift MEC curve outward (i.e. factors other than interest rate which can cause increase in investment).

(7.2.4)

Q.69 State briefly how a government can influence the level of private investment in the country.

(7.2.5)

CHAPTER 8: MULTIPLIER AND ACCELERATOR

Three Approaches to Macro-economic Equilibrium:

Q.70 (a) Show macro-economic equilibrium using Keynes' Aggregate demand and Aggregate Supply (AD-AS) Model.
(b) Show impact on National Output (or GDP) if:
(i) Aggregate Supply is boosted.
(ii) Investment (or Aggregate Demand) is boosted.
(Assume economy is below potential output)

(8.2.1)

Q.71 (a) Show macro-economic equilibrium using Saving-Investment Model with the help of diagram.
(b) Show impact on National Output (or GDP) if Investment is increased.
(Assume economy is below potential output)

(8.2.3)

Q.72 (a) Show macro-economic equilibrium using Total Expenditure (or Total Output or Total Consumption) Model.
(b) Show impact on National Output (or GDP) if Investment is increased.
(Assume economy is below potential output)

(8.2.4)

Multiplier and Accelerator Principles:

Q.73 (a) What is 'Multiplier'? Explain three factors that determine the size of the multiplier.
(b) Define the term "Multiplier effect". Explain the working of the Multiplier with the help of a numerical example. (for the purpose of working, assume that marginal propensity to consume is equal to 0.75)

(8.3.3, 8.3.2)

Q.74 (a) Briefly state the assumptions of Multiplier Principle.
(b) Explain the concept of multiplier with the help of saving and investment diagrammatic representation.
(c) Briefly state the limitations of Multiplier Principle.

(8.3.4, 8.3.5)

Q.75 (a) Explain briefly the Accelerator Principle.
(b) Identify assumptions of Accelerator Principle.
(c) Explain principle of acceleration in Macroeconomics with the help of a numerical example.
(d) Briefly state the limitations of Accelerator Theory.

(8.4.2, 8.4.3)

Q.76 Briefly explain the multiplier-accelerator theory.

(8.5.1, 8.5.2)

CHAPTER 9: GROWTH AND TAXES

Economic Growth:

Q.77 (a) Define Economic Growth.
(b) State advantages (or benefits) of growth.
(c) State disadvantages (or costs) of growth.

(9.1.1, 9.1.2, 9.1.5, 9.1.6)

Business Cycle:

Q.78 (a) Define the term "business cycle".

(8.5.3)

(b) Briefly explain four phases of business cycle, with the help of a diagram.

(9.1.3)

(c) List down Leading, Coincident and Lagging indicators of an economy.

(9.1.4)

Fiscal Policy:

Q.79 (a) What is meant by Fiscal Policy. What are its main objectives.
(b) How fiscal policy measures (or tools) may help to stimulate aggregate demand and reduce unemployment in an economy (or to increase the economic growth).
(c) How fiscal policy measures (or tools) can be used to reduce aggregate demand (or to slow down economic growth).
(d) Briefly explain some limitations of fiscal policy.

(9.2.1, 9.2.2, 9.2.3)

Taxation:

Q.80 (a) Identify and briefly explain the functions (or purposes) of a tax system.

(9.3.2)

(b) Identify and briefly explain the good characteristics of a tax system.

(9.3.5)

Q.81 (a) Identify and briefly explain Adam Smith's four canons of taxation. Also identify canons of taxation developed by other economists.

(9.3.3)

(b) What do you understand by the terms 'regressive', 'proportional tax' and 'progressive tax'? Give one example of each of the above types of taxes. (9.3.4)

Q.82 (a) What is meant by Direct Taxes? Give three examples of Direct Taxes.
(b) Briefly explain the advantages (or merits) and disadvantages (or demerits) of Direct Taxes. (9.3.6)

Q.83 (a) What is meant by Indirect Taxes? Give three examples of Indirect Taxes.
(b) Briefly explain the advantages (or merits) and disadvantages (or demerits) of Indirect Taxes. (9.3.7)

CHAPTER 10: PUBLIC FINANCE

Public Finance:

Q.84 (a) Identify and explain Musgraves's functions of public finance. (10.1.2)

(b) In what aspects public finance can be an importance area for state. (10.1.3)

(c) What is the difference between public finance and private finance. (10.1.1)

Public Expenditure:

Q.85 (a) What is the role of public expenditure in a developing country. (10.2.2)

(b) List down causes of continuous increase in public expenditure. (10.2.1)

Fiscal Budget:

Q.86 (a) What is meant by Fiscal Budget. Why are fiscal budgets established. (9.2.6)

(b) If fiscal budget is in deficit, how can it be funded (or financed)?. (9.2.4)

CHAPTER 11: MONEY (INFLATION AND UNEMPLOYMENT)

Inflation:

Q.87 (a) Define inflation. Briefly discuss unfavourable effects of inflation.
(b) The most common way to measure inflation is *Consumer Price Index (CPI)*. Define CPI and identify its limitations.
(c) Explain following different forms of inflation:
(i) Hyperinflation
(ii) Stagflation
(iii) Wage-price Spiral inflation
(iv) Deflation
(11.6.1, 11.6.2, 11.6.3, 11.6.4)

Q.88 (a) What do you understand by Demand-pull inflation?
(b) Briefly discuss the probable causes of Demand-pull inflation.
(c) How can Demand-pull inflation be controlled? (11.6.5, 11.6.7)

Q.89 (a) What do you understand by Cost-push inflation?
(b) Briefly discuss the probable causes of Cost-push inflation.
(c) How can Cost-push inflation be controlled? (11.6.5, 11.6.7)

Q.90 Quantity theory of money described the relationship between Money Supply and Inflation Rate.
(a) Explain the Quantity theory of money.
(b) State the assumptions and limitations of Quantity theory of money.
(c) Quantity theory of money states that if government wishes to control the inflation, it should control the supply of money. What are the tools available to the central bank of a country for controlling the supply of money in the economy?

(11.5.1, 11.5.2, 11.4.4)

Unemployment:

Q.91 (a) Define unemployment.
(b) Briefly describe the various types of unemployment.
(c) Discuss how governments might seek to reduce high unemployment levels.

(11.6.8, 11.6.9)

Q.92 Explain the concept of 'Natural rate of unemployment' with the help of a diagram.

(11.6.10)

Phillips Curve:

Q.93 (a) What is a Phillips Curve?
(b) With the aid of a short run Phillips curve, show that there is a trade off between inflation and unemployment.

(c) Economist Milton Friedman agreed that in the long run, no trade-off between inflation and unemployment existed. Explain this with the aid of a diagram.

(11.6.10)

GRID D: INTRODUCTION TO BANKING SYSTEM, FINANCIAL MARKETS AND INTERNATIONAL TRADE CHAPTERS: 11 (MONEY), 12, 13, 14, 15 WEIGHTAGE (25 – 35)

CHAPTER 11: MONEY (MONEY AND ITS VALUE)

Q.94 There are three core views of the role of money within an economy i.e. Classical view, Keynesian view and Monetarists' view.
Briefly discuss role of money under each view.

(11.1.4, 11.1.5, 11.1.6)

Q.95 (a) Briefly explain some problems with barter system.
(b) Define money. Point out the essential attributes of good money.
(c) Identify and explain briefly the different functions of money. Describe the effects of inflation on the functions of money.

(11.2.1, 11.2.2, 11.2.4)

Q.96 There are three kinds of money i.e. Commodity money, Commodity-backed money, and Fiat money.
(a) Define Commodity money. List some commodities which have been used as money.
(b) Define Commodity-backed (or representative money). Give an example.
(b) Define Fiat money.

(11.2.3)

Q.97 Different stages of evolution of money include Commodity money, Metallic money, Paper money, Bank money, and Credit money.
(a) List some disadvantages of Metallic money.
(b) What are the advantages of 'Paper Money'?
(c) List some examples of Bank money.
(d) Define Credit money. List its two advantages and two disadvantages.
(11.2.5, 11.2.6)

Q.98 (a) What is meant by the Liquidity Preference?
(b) Keynes has identified three reasons why people prefer to hold money in liquid form. Identify these motives.
(c) Define Bond. How does market rate of interest affects value of bond?
(11.3.5)

Q.99 (a) What are the factors which influence total demand for money in an economy.
(b) Briefly explain with the help of suitable diagrams, how each of the above factors affects the quantity of money demanded in an economy.
(11.3.4, 11.3.7)

Q.100 (a) To measure the money in circulation (or money supply), money is classified into different types, from narrow to broad. State narrow and broad definition of money (or state components of money supply).
(b) Money supply in a country is controlled by government. What is the effect of increase in money supply on economy.
(11.4.2, 11.4.3)

CHAPTER 12: MONETARY POLICY

Q.101 (a) Define Interest.
(b) Differentiate between Nominal Interest Rate and Real Interest Rate, with an example.
(12.1.1, 12.1.2)

Q.102 (a) Briefly describe the main factors on which general rate of interest depends.
(b) What is the effect of increase in interest rate on an economy.
(12.1.3, 7.2.6)

Q.103 (a) Define Central bank.
(b) Briefly explain functions of a central bank.
(12.2.1, 12.2.2)

Q.104 (a) What is Monetary Policy?
(b) Explain any four instruments (or tools) that a central bank may use to implement its monetary policy.
(c) There are certain limitations to effectiveness of monetary policy. Discuss any four such limitations.
(d) What is Keynesian liquidity trap? Identify any three policies which can help to break out of the liquidity trap.
(12.2.3, 12.2.7, 12.3.6)

Q.105 (a) Discuss the main objectives of monetary policy.
(b) Briefly describe the conflicts that may exist between various objectives of monetary policy.
(12.2.6)

Q.106 (a) Explain the concept of Expansionary policies with the help of a diagram.
(b) Explain the concept of Contractionary policies with the help of a diagram.
(12.2.4, 12.2.5)

Q.107 (a) State the meaning of "financial intermediaries", and "financial intermediation".
(b) Define a bank. Briefly explain the functions of a commercial bank and an investment bank.
(c) Commercial banks can further be classified into Retail bank, Specialized bank and Cooperative bank. Briefly explain each type of bank.
(12.3.1, 12.3.2, 13.1.4)

CHAPTER 13: CREDIT

Q.108 (a) Define "Credit". What is the difference between Trade credit and Bank credit.
(b) List down advantages and disadvantages of credit.
(13.1.2, 13.1.3)

Q.109 (a) Describe the process of credit creation by commercial banks with the help of an example.
(b) Briefly discuss any four factors which might limit the commercial banks' ability to create credit money in an economy.
(13.1.4, 13.1.6)

Q.110 (a) Define Money multiplier (or Credit multiplier).
(b) Under what circumstances, money multiplier will not perform as accurately as predicted.
(13.1.5)

CHAPTER 14: BALANCE OF PAYMENTS AND TRADE

Balance of Payment:

Q.111 (a) Define the term "Balance of Payment".
(b) Balance of payments is a combination of current account and capital/financial account. Briefly discuss the components of:
(i) current account
(ii) capital and financial account
(14.1.1, 14.1.2, 14.1.3)

Q.112 (a) Explain what is meant by the term 'current account deficit (also called balance of payments deficit)'.
(b) Briefly describe the main causes of deficit in the current account (or balance of payments). Also include causes with particular reference to Pakistan.
(14.1.8, 14.1.9)

Q.113 (a) Discuss the difference between 'financing' a balance of payments deficit and 'correcting' that deficit.
(b) List some ways of financing the current account (or balance of payment) deficit.
(c) List some ways of correcting the current account (or balance of payment) deficit. Also include corrective measures with particular reference to Pakistan.
(14.1.4, 14.1.9)

Q.114 (a) Define the term "Balance of trade".
(b) Define the term "Terms of trade". When is "terms of trade" said to improve. Does improved terms of trade results in improving or worsening current account deficit?
(c) Explain, with the help of a diagram, how tariffs improve current account deficit.
(14.1.6, 14.1.7, 14.1.8)

Exchange Rate:

Q.115 (a) Define Exchange Rate.
(b) Explain with the help of a diagram how exchange rate is determined in a free market (or under floating exchange rate system).
(c) What is the effect of High (or Rise or Strong or Appreciated) exchange rate on imports/exports and balance of payment.
(d) What is the effect of Low (or Fall or Weak or Depreciated) exchange rate on imports/exports and balance of payment.
(14.2.1, 14.2.2, 14.2.3, 14.2.4)

Q.116 (a) What do you understand by the terms 'floating exchange rate' and 'fixed exchange rate'?
(b) List three advantages of each of the above types of exchange rates.
(14.3.4)

Q.117 (a) Identify the reasons why a government may want to influence exchange rate.
(b) List five instruments which government can use to influence exchange rate.
(14.3.1, 14.3.2)

Q.118 (a) What do you understand by devaluation of currency?
(b) Give reasons of devaluation in recent years by Pakistan government.
(c) Effectiveness of policy of devaluation depends on certain factors. Briefly explain them.
(14.4.1)

Q.119 (a) Explain the effect of 'devaluation of currency' on the balance of payment of the country with the help of J-curve. Why in the short-run the current account deficit may get worse before improving.
(b) Explain the effect of 'revaluation of currency' on the balance of payment of the country with the help of "inverse J-curve".
(14.4.2)

CHAPTER 15: FINANCIAL MARKETS

Q.120 Financial market is a market in which financial assets are traded. There are three types of financial markets i.e. Money market, Capital market and Derivative market.
(a) Define 'Money market'.
(b) Briefly describe any two instruments traded on money markets.
(c) Identify any three institutions which operate in money market.
(15.1.2)

Q.121 Financial market is a market in which financial assets are traded. There are three types of financial markets i.e. Money market, Capital market and Derivative market.
(a) Define 'Capital market'.
(b) Briefly describe any two instruments traded on capital markets.
(c) Identify any three institutions which operate in capital market.
(15.1.3)

Q.122 Financial market is a market in which financial assets are traded. There are three types of financial markets i.e. Money market, Capital market and Derivative market.
(a) Define "Derivatives" and "Derivate market".
(b) Briefly describe (or differentiate) ways in which derivatives are traded.
(15.1.4)

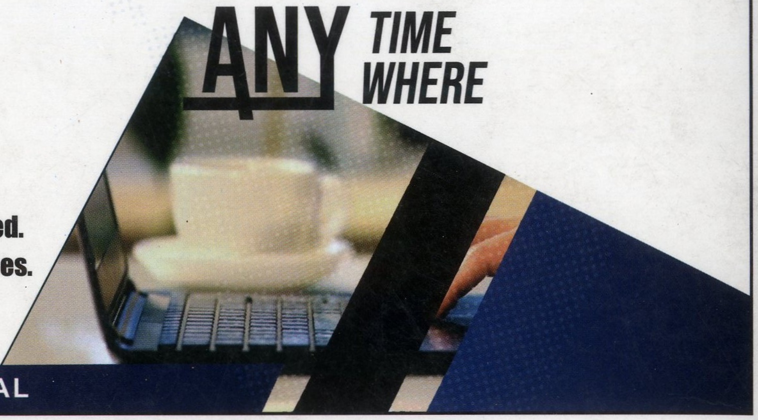
Q.123 (a) What is a stock exchange?
(b) Two types of shares traded on a stock exchange or Common (or equity) shares (or stocks) and Preference Shares. Briefly describe (or differentiate) them.
(15.1.3)

Q.124 (a) What is a mutual fund?
(b) Describe the main advantages of investing through mutual funds.
(15.1.3)

Join

RISE PREMIER
SCHOOL OF ACCOUNTANCY

ONLINE VIRTUAL Classroom



- **Online classes of your dream teacher.**
- **Recorded lectures of real class room.**
- **Complete coverage of syllabus at normal speed.**
- **No wastage of time due to gaps between classes.**
- **Multiple revisions at your convenience.**
- **Truly exam focused.**

0321-8478825 | 0321-VIRTUAL

ALL PUBLICATIONS AFC & CAF

AFC-1 Functional English
AFC-2 Business Communication
AFC-3 Quantitative Methods
AFC-4 Introduction to Information Technology
CAF-1 Introduction to Accounting
CAF-2 Introduction to Economics and Finance
CAF-3 Business Law (Vol-1 & Vol-2)
CAF-4 Business Management and Behavioural Studies
CAF-5 Financial Accounting and Reporting - I (Vol-1 & Vol-2)
CAF-6 Principles of Taxation
CAF-7 Financial Accounting and Reporting - II (Vol-1 & Vol-2)
CAF-8 Cost and Management Accounting
CAF-9 Auditing and ISA Perspective (Vol-1 & Vol-2)

Stockists

Sole Distributor

LAHORE
Waheed Book House
Shop # 1, Lodhi Arcade, 42-Ferozpur Road, Near ICMAP Building, Lahore.
Tel: 042-37500032 / 37500227

RISE Book Shops

6-Aurangzaib Block, New Garden Town, Lahore.
25-S Gulberg - II (Near Gung Mahal) Lahore.
Mob: 0321-4587912

RAWALPINDI / ISLAMABAD
Prince Book Bank
Commercial Center, Mukhtar PlazaSatelite Town, Rawalpindi.
Tel: 051-4843135

Good Book Shop
1275 Chick Bazaar, Sadar Rawalpindi.
Tel: 051-5125812 / 5125830

New Good Book Shop
Twin City Plaza, I-8 Markaz, Islamabad.
Tel: 051-34862470 / 34862478

FAISALABAD
Kitab Markaz
Aminpur Bazar, Faisalabad.
Tel: 041-2642707

MULTAN
New Books n Books
Hussain Arcade Near Punjab Bank, Gol Bagh Gulgasht, Multan.
Tel: 061-6511828 / 6223080
News Corner
Gulgasht Colony, Multan.
Tel: 061-6522850 / 6522950

KARACHI
AL-Jamia Book House
Shop # 8, Momin Square Block # 6, Opp Habitt Store Gulshan-e-Iqbal, Karachi.
Tel: 021-4960904 / 4960746

Commerce Book Point
Business Arcade, Opp Sabzi Mandi, Karachi.
Mob: 0300-92266612

Petiwala Book Depot
Shop # 8, Raja & Kausar Square, Behind Fresco Sweets, Burns Road, Karachi.
Tel: 021-32638187 / 32217170

PESHAWAR
Sarhad Book Depot,
Qisa Khawani Bazar Peshawar.

RISE PREMIER
PUBLICATIONS

652365478969
Rs.500/-

GARDEN TOWN CAMPUS:
6-Aurangzaib Block, New Garden Town, Lahore.
Tel: 042-35941920, 0305-7778952

GULBERG CAMPUS:
25 - S Gulberg - II (Near Gung Mahal) Lahore.
Tel: 042-35751240, 0303-0508702